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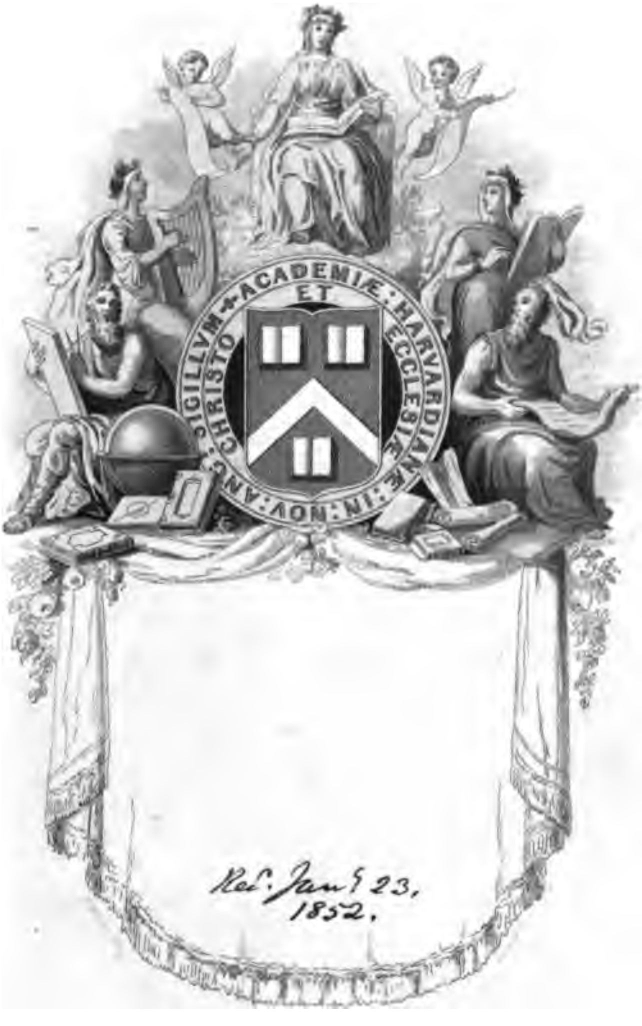
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AND TO

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ILLUSTRATED WITH ENGRAVINGS OF

FARM HOUSES AND FARM BUILDINGS,

IMPROVED BREEDS OF

CATTLE, HORSES, SHEEP, SWINE, AND POULTRY,

FARM IMPLEMENTS, DOMESTIC UTENSILS, &c.

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Union Ellery, J. A. Smith
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Yonkers, J. Bashford, p m

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AGRICULTURE AND RURAL AFFAIRS

"TO IMPROVE THE SOIL AND THE MIND."

NEW SERIES.] JANUARY, 1845. [VOL. II.—No. 1.

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MONTHLY NOTICES.

Communications have been received since our last, from George Geddes, Esq., Dr. James Bates, A Farmer of Western New-York, D. Lee, Richmond, A Practical Farmer, P. A. Reading, J. B. Cook, W. T. Fannin, G. B. Smith, J. Townsend, Noyes Darling, Thomas Affleck, Za. Drummond, Oneida, B. P. Johnson, H. S. Randall, J. N. Smith, S. W. Jewett, C. D., James Pedder, O. W. Owen, H. J. Powell, A. G. Summer, A Subscriber, W., L. A. Morrell, Franklin, D. T., Spade Labor, Double-you, D. A. Ogden, W. A. Cowell, C. N. Bement, Exekiel Rich, L. B. Langworthy, N. N. D., J. P. Norton.

It will be seen by this list, that we have on hand a goodly number of contributions, all of which will be disposed of as rapidly as our limits will permit. Several, in type for this No., are necessarily deferred till our next.

We are indebted to J. S. Skinner, Esq., for a copy of his Address at Wilmington—to E. Mack, Esq., Ithaca, for a copy of his Address before the Tompkins Co. Ag. Society—to J. W. Proctor, Essex, for his Address to the Essex Co: (Mass.) Ag. Society—to John Delafield, Esq. Oaklands, for his Address to the Seneca Co. Ag. Society—to T. B. Wakeman, Esq., for Mr. Talmadge's Address to the American Institute—to D. G. Mitchell, England, for a copy of Mr. Shepard's treatise on Guano—to D. A. Ogden, Esq., for Mr. Lawrence's Address before the Yates Co. Ag. Society—to S. Williams, for his Essay on Manures, prepared for the Seneca Co. Ag. Society; and to Messrs. A. Walsh, Lansingburgh, and Egbert Cowles, Farmington, Ct., for papers, containing Reports of Agricultural Societies.

James Gowen, Esq., will please accept our thanks for his kind letter of Dec. 2. We shall be very glad to receive an article on the subject he mentions.

Agricultural Addresses.—Notices of such addresses as we have been favored with, are unavoidably deferred till our next.

Pure blood Merino Sheep.—We saw the other day some fine Merino sheep, purchased by Col. J. M. Sherwood, of Auburn, (N. Y.) of Mr. Jacob N. Blakeslee, of Watertown, Litchfield county, Connecticut. We have before spoken of Mr. Blakeslee's sheep—in last volume, pages 315 and 338. They are a very valuable stock, and we presume will lose none of their excellence or reputation in the hands of Col. Sherwood.

Hussey's Reaping Machine.—We take pleasure in inviting attention to the advertisement of Mr. Hussey, on our last page. His Reaping Machine, from all we hear of it, has fully answered public expectation, and we trust he will be abundantly rewarded, as he certainly ought to be, for the time, ingenuity and money he has expended in bringing his useful invention to its present state of perfection.

Portable Mills.—We would refer Mr. W. T. Fannin of Georgia, to the notice and representation of Sinclair & Co's Portable Mill, which we publish in this number. We possess no more definite information in relation to this mill, or Platt's, heretofore published, than we have given to the public. He can probably ascertain any farther particulars he may require, by addressing the manufacturers.

Saleratus as a Substitute for Saltpetre.—Our correspondent, "C. D." it seems, made a mistake in his paragraph on this subject, in our Nov. number, p. 345, which escaped our notice, till our attention was called to it by a writer in the Providence Transcript, and since by several correspondents. Saleratus, instead of being "composed of sulphate of potash and pearlash," as stated by C. D., "is not," says the writer in the Providence paper, "a very pure bi-carbonate of potash. As usually found in the shops, it may contain some small portion of sulphate of potash and of pearlash, together with certain impurities, none of which possess any remarkable preservative qualities, or would be likely to produce any valuable effect upon muscular fibre."

State Ag. Society.—We would remind our readers in this State, that the Annual Meeting of the N. Y. S. Ag. Society is to be held at the old State Hall in this city, on Wednesday, the 15th inst.

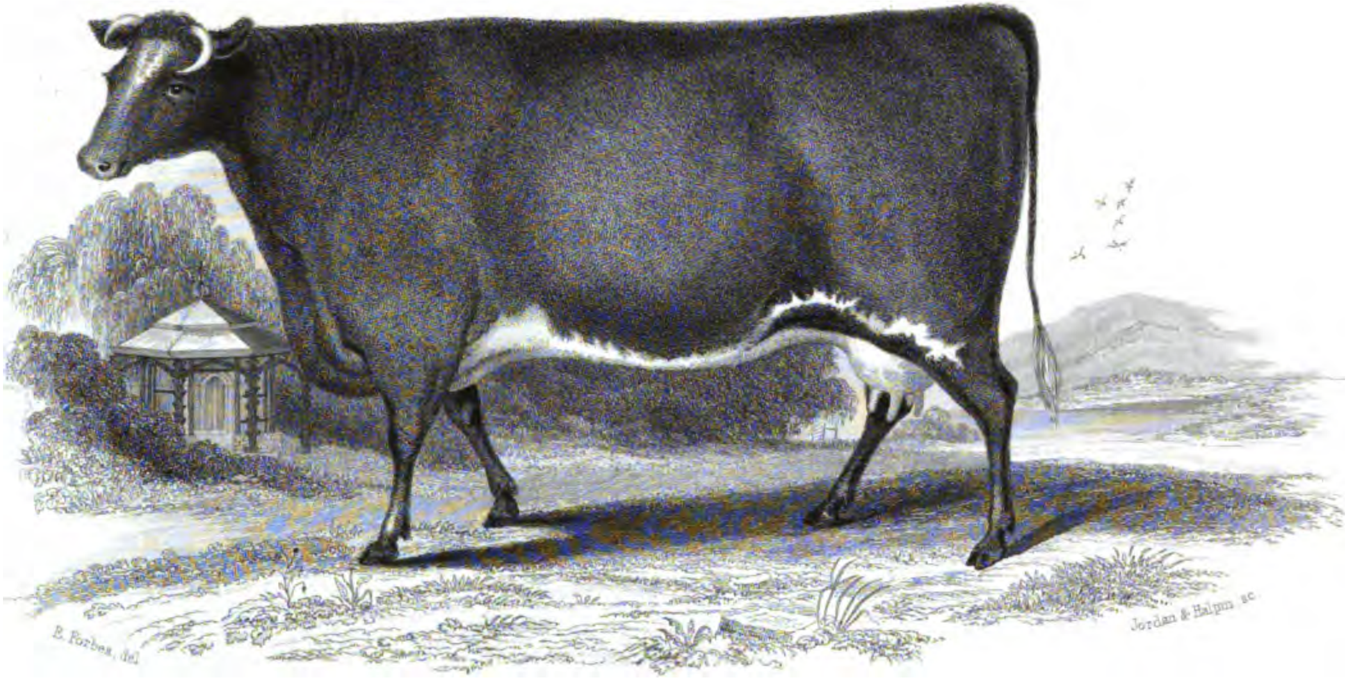
To our Friends in the South-West.—Circumstances forbidding us to visit, as we have long desired to do, the numerous friends of The Cultivator, in the South-Western States of the Union, we have, at the suggestion of several of them, engaged that old and familiar acquaintance of the readers of our paper, Solon Robinson of Indiana, to undertake an Agricultural Tour through several of the south-western states, for the purpose of procuring information and promoting the interests of "The Cultivator," in that section of our country. Those who have read the numerous articles of Mr. Robinson for the last ten years will, we doubt not, be gratified with this arrangement, and we trust that his correspondence during his present tour, will be found interesting to all our readers. We bespeak for Mr. R. a warm reception by the readers of the Cultivator whom he may visit, and hope we shall receive, through him, a large addition to our circulation, assured as we are by numerous friends in that quarter that all that is necessary to accomplish this object, is to have our paper brought to the notice of the planters of that extensive region. Though printed so far north, The Cultivator will be found of nearly equal interest to the Planter of the South as to the Farmer of the opposite section of the country. It is not intended as a *local* but as a *national* journal; and aside from the fact that the general principles of agriculture are everywhere the same, the constantly increasing list of its correspondents in the south and south-west, with the Letters of Mr. Robinson, will make its pages as valuable to those sections of our country, as to any other. Indeed, we think the communication in this No. from our valued friend Affleck of Mississippi, well worth ten times our annual subscription price, to any planter who will read and act upon such of his suggestions as he may find he can adopt to his advantage. Mr. R. will receive subscriptions for our current vol. and orders for any of the previous volumes; and we shall be greatly obliged for any aid which our friends may be able to render him.

☞ The readers of "*The Cultivator,*" and of the "*Central New-York Farmer,*" were apprised in the December number of both papers, that the latter would, at the close of the then current volume, be discontinued, and that its publishers would hereafter labor to promote the circulation of "The Cultivator." In making this arrangement, we were aware that we should not meet the views of many friends who have been very desirous of continuing a paper in Central New-York, but a proper regard for our own interests, has, among other things, induced us to make the present arrangement. Since the announcement in the December number of the Farmer, we have received from numerous individuals in different sections of this and other States, letters expressing regret at the discontinuance of our paper; and in some of them the writers have hinted pretty strongly that we have done the public a wrong in so doing. As we cannot well answer all letters of this character without encroaching too much upon our other labors, and as we have no doubt that *all* who thus address us will become subscribers to the Cultivator, we beg leave in this public manner to tender our acknowledgments for the manner in which our labors have been noticed, and to assure our friends that we duly appreciate the many favors which we have received from the friends of agriculture.

We trust that all with whom we have formerly held converse through the columns of the "Farmer," will continue to take some agricultural paper, and it will give us great pleasure to forward their names as subscribers to the Cultivator. We will not permit ourselves to believe that those who have during the several years that the "Farmer" has been published, been its constant patrons and readers, will, now that it is united with another, and we hope more valuable journal, forego the advantages of agricultural reading, or be deprived of intercourse with their brother farmers through the agricultural press.

Comstock & Johnson.

Intemperance.—We have received a well written article on this subject, by "*A Farmer's Wife,*" which, with the present press of matters relating more particularly to the objects of our paper, it will be impossible for us to publish.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OUR PLATE

IMPROVED SHORT HORNED COW, "RED LADY."

Red Lady, the property of James Lenox, Esq., of New-York, received the prize offered by the New-York State Agricultural Society for the best cow exhibited at their show at Poughkeepsie, Sept. 1844. She also received the first prize at the Dutchess County Society's Show in 1843. Red Lady was calved in 1834, and bred by J. Whitaker, Esq., of Burleigh, Yorkshire, England, and imported by Mr. Lenox in 1840. Her pedigree is as follows:

"Red Lady, by Hubback, 2142. Dam by Don Juan, 1923. Grand Dam and G. D. Dam, by Mr. Woodhouse's bulls. The two latter names are not registered, but the stock has been good upwards of sixty years, and from this herd, Red Lady's ancestors have descended." See Herd Book, vol. 5, p. 841.

Mr. Lenox has at his beautiful place Netherwood, Dutchess county, a small but splendid herd of improved Short Horned Cattle, consisting of imported animals and their progeny. In 1840, he imported two cows, Red Lady and Daffodil, the latter in calf by the celebrated Sir Thomas Fairfax (5196)—in 1841, the splendid white bull King Charles 2d, (4154) exhibited at the late State Fair, and of which we shall hereafter give a portrait. In 1843 Mr. L. imported another cow "Gayly," in calf by Lord Henry Fairfax, (6145.) In the produce of these importations, Mr. L. has a beautiful lot of young animals of great excellence. For pedigree of Daffodil, see Herd Book, vol. 5, p. 231—for that of Gayly, p. 425, do.

TO OUR PATRONS.

In presenting you the first number of a new volume, we have great pleasure in tendering you the compliments of the season, and at the same time inviting your attention to the efforts we have made to present you with a paper worthy of the occasion. By the continued liberality of our correspondents, to whom we and the public are so much indebted for the interest and spirit imparted to our pages, and whose labors have given it so strong a hold on the public mind, we are enabled this month to present our readers with communications of unusual interest to every section of our extended country, from the extreme north to the "sunny south." In the way of embellishment also, we are enabled to present our readers with something new and beautiful, in the portrait of Mr. Lenox's very superior cow, "*Red Lady*," engraved on steel in a style altogether superior to anything of the kind heretofore issued in this country, and equalling the beautiful plates of the London Farmer's Magazine. Though this plate is issued at an expense of over $200, it is our intention, should our circulation the present year warrant it, to follow it with others of a similar character. Indeed no efforts or expense will be spared on our part, to sustain and increase the interest of our pages each succeeding year. In return for these exertions to please, is it too much to ask of our friends, and the friends of agricultural improvement generally, that they will aid us by their efforts and influence, in extending the circulation of "The Cultivator?" The invitation to act as Agents, is extended to every one of our readers who may deem our journal worthy of this mark of his favor. It will be seen that by clubbing together, the cost of the paper, postage and all, will be less than one dollar a year, and we would suggest to such gentlemen as may be disposed to aid us in this way, the example afforded by several of our friends last year, who adopted the course mentioned in the following extract of a letter:

> "In order to obviate any objection to the price of the subscription, I divided the $10 for fifteen copies, into fifteen parts, and received of each subscriber his proportion of the $10; and in this way I soon obtained the fifteen subscribers, for which I send you herewith $10. If the friends of agricultural improvement generally, would adopt this course, I think your subscription might easily be doubled or trebled, as there are few neighborhoods where a club of seven or fifteen subscribers might not be obtained, with but little trouble, as in this way the paper and postage would cost less than a dollar."

The writer of this letter, by adopting this course, procured over fifty subscribers to our last vol. in a place where we had never before had a dozen. Several other agents who adopted this plan, were equally successful. To any person disposed to act as Agent, we shall with pleasure send such number of extra copies as they may order, that they may have copies on hand to deliver to those who become subscribers.

CONDENSED CORRESPONDENCE.

Merino Sheep of Col. Randall and Hon. Wm. Jarvis.—We have a letter from Col. Randall, in relation to the pedigrees of such of his sheep as have descended from the flock of Hon. Wm. Jarvis. In the communication of Col. R. in our last No. he gave no detailed statement in relation to this portion of his flock, supposing it would be generally conceded that Mr. Jarvis had preserved a portion of the merinoes originally imported by him, free from all alien admixture. "Finding myself mistaken in this supposition," says Col. R. "I addressed the following inquiry to Mr. Jarvis:—Have you a flock of merinos, which you *know* to be the pure blooded descendants of your early importations?" In reply to this question, Mr. Jarvis details minutely the course he has pursued in the management and care of his flocks. We make but a brief extract—all, certainly, that can be necessary to establish the fact that he has kept a portion of his flock as free from all foreign admixture as at the time of their importation. Mr. Jarvis says:—"In May, 1826, I purchased 52 or 53 at the sale in Brighton, Mass., of the large importation of Saxony sheep by Messrs. Searle of Boston; and the following autumn I selected and separated one hundred Merino ewes from my flock, and the rest I crossed with Saxony bucks. Those hundred merinos and their descendants I have always been careful to keep by themselves, both summer and winter, and have been very particular in the choice of pure blood Merino bucks to put to them for breeding." Col. Jarvis farther says:—"My flock consists of about a thousand sheep of all kinds, of which there are one hundred and sixty merinos, the pure blooded descendants of those I purchased in Spain in 1809 and '10, and exported from Lisbon; about one hundred full blood Saxons; and the remainder are crossed between Saxony and Merino. The fleeces of the latter, from the attention I have paid to the selection of bucks, (as before mentioned) are much heavier than in 1832. The average of the three kinds, taken together, is now 3 lbs. 2 oz. to 3 lbs. 4 oz. per head."

Irrigation, &c.—We make the following extract from a letter of P. A. Reading, Esq. of Philadelphia:—"The application of manure and the best rotation of crops, I deem to be at this time a question of great importance to our farming interest. Next in order of importance, is the subject of Irrigation, as practicable to the system of farming in the United States, under the system of rotation in crops, when each field becomes the meadow in turn, and when the locality is such as to render a small stream or spring available for such purposes. The time when, and how long a period should the water be turned on, in order that the coming crop of grass may receive the most benefit. All these things, and many more, I should be glad to see discussed in the Cultivator."

Farmers' Troubles.—We have received a communication treating of the peculiar evils to which the farmer in this country is subjected, and pointing out for some of them a remedy, signed "A Farmer of Western New-York." The writer thinks there is "no class in the community which are so poorly paid for their labor, as farmers; many of whom," he says, "like the waterman who is rowing against the current, instead of making headway, are actually beating down stream."—Among the evils and hardships with which the farmer has to contend, he enumerates the smut, rust and fly, in grain—weeds—the rot in the potatoe—low prices of produce—high price of labor in proportion to the price of produce—emigration to the west—indebtedness—high rates of taxes, &c. &c. He thinks farmers "run in debt at the stores for many things they might do without"—that they "have too much aped the fashions of the proud and vain—have gone beyond their means for fine carriages, elegant dwellings, costly furniture and apparel." This, he says, they "were drawn into in times when speculation ran high, and produce brought enormous prices.” He thinks farmers permit themselves to be ruled too much in pecuniary and political matters by a class of men whose interest it is to “keep down the price of every thing they consume,” and that as long as farmers continue to be “ruled and trodden down by them, they merit the appellation of *dough faces*.” He thinks the presses and the banks are too much controlled by the class just mentioned, and observes that “if a farmer has been so unfortunate as to get in debt, and wants the loan of a little money to save his property from being sacrificed, he cannot obtain a dollar, though he presents a note endorsed by the best men in his county; while at the same time if a speculator wants money to bid off that same individual's property, he can get from the bank as much as he wants.” Unless there is an end put to this state of things, he says it is his “honest conviction that the time is not far distant, when all the real estate will be owned by the wealthy land holders, and the present owners and their posterity will be only tenants and serfs.” He proposes as a remedy for these troubles, the adoption of what he calls “*the farmer's system*,” the outlines of which he gives as follows:—“Let every farmer provide himself with a store-house or granary, of sufficient dimensions to contain the products of his farm, and there secure them with bolts and bars, until he can obtain fair prices for them. Let there be an understanding among the farmers generally, throughout the country, and let them regulate their own prices. Let them establish *newspapers* at different points, which shall advocate the farmer's cause, and let them be liberally sustained. Let lecturers be appointed to go through the country, and arouse the energies of the farming population on subjects connected with agriculture and their interests.” “We do not,” says our correspondent, “wish to monopolize or tyrannize over other classes of the community; all we ask, is a fair compensation for our labor, and to be raised to our proper sphere in the scale of being. We do not want to be confined to unremitting toil, like a Russian serf, or a galley slave. We want some leisure to read and reflect, as intelligence is the life of liberty; and general information among all classes, is indispensable to qualify them for the discharge of the important duties of citizens of this republic.”

PROFITABLE APPLE TREE.—We are informed by Mr. INGALSBE, of South Hartford, in this state, that Mr. Seth Cooley of that town, gathered forty bushels of greening apples, of a superior quality, from a single tree the past season, worth from 44 to 50 cents a bushel on the premises. The tree was situated in rather a north-western exposure—soil, a deep loose gravel, well manured. “There is many a two acre lot in this town,” says our informant, “that yields less profit than the three square rods occupied by this tree.”

RAPID FATTENING OF A PIG.—W. R. Gilkey, Esq. of Windsor, Vt., informs us that “Mr. T. R. Otis, of that place, bought a pig, April 24th, 1844—weight 9¼ lbs., (said to be five weeks old.) He killed the same on the 18th of Nov. It weighed, dressed, 350 lbs.; making an increase of *pork*, deducting the weight of the pig when bought, 340¾ lbs. in 208 days, it being 1 lb. 10 oz. per day. Blood not known. Feed, slops from the house, and corn meal. Beat this who can.”

TOBACCO FOR GLANDERS.—In answer to the inquiry of Mr. Clark, (vol. I., p. 336,) Mr. COOK of Demopolis, (Ala.,) says—“I regret to state it is out of my power to give to your correspondent, Mr. C. B. Clark, specific directions as to quantity or manner of giving, as I have to rely on impressions alone, long since made on my mind, and that too, but occasionally spoken of. The impression is, the quantity given was considerable, and once a day for as much as eight or ten days, and given in the common form of a drench. My impressions as to quantity, strength, &c., result from what I have distinct recollection of hearing my father say in relation to the case, that he treated him as a dead horse; having at the time, no thought of a cure; he gave something else at the time, but always spoke of tobacco, in his opinion, as the sole agent in the cure. The subsequent treatment of the horse I think was purely southern, corn and fodder, running on a poor grass pasture.”

TOBACCO FOR CONSUMPTION.—Mr. Cook farther says—“I would submit it as a matter worthy of serious inquiry, whether an habitual tobacco chewer or smoker, has ever been known to die of pulmonary consumption.”

APPLES WITHOUT SEED OR CORE.—Mr. O. W. OWEN of Buffalo, says—“I find in a late number of the Cultivator, an article on the absurdity of the existence of apple or pear trees bearing fruit without seeds or core. Will you please to state to your readers that the fruit *can* be produced perfectly free of seed or core, by the following process: Where the tree is sufficiently young to admit of bending or twisting without breaking, take the extreme top of a limb, or small tree, and bring it to the earth, bury it, and when it shall have taken root, cut off the other end of the limb or tree, and you will have thus reversed the order of things, the body or heavy part of the limb being uppermost. New limbs, leaves and blossoms, will put forth in due season, and the fruit will be free of seeds or core. The process was made known to me by a gentleman belonging to Ohio, at the time of presenting me with a specimen of the above fruit, which he raised as stated. I was also told that this transformation could not be produced in other than the apple or pear fruit.”

INQUIRIES.

NIGHT SOIL.—“Franklin” is referred to pp. 174, 266 and 381, of our last vol. for an answer to his inquiry as to the best mode of using this valuable manure.

STEEPING SEEDS.—The same correspondent will find the information he asks for, on this subject, in the communication of Dr. Smith, p. 281 of our last vol., where it is given in a more simple form than in any other paper, which has fallen under our notice. The other matters in Franklin's letter shall be attended to hereafter.

CAYUGA MARSHES.—In reference to the inquiry of Mr. JASON SMITH of Tyre, relative to the quality of the muck from the Cayuga marshes, &c., we reply that we have conversed with Prof. EMMONS, and also with Prof. HALL, on the subject. They both agree in the opinion that these marshes would become very productive, if they could be drained. If Mr. Smith will send a sample of the muck, Prof. Emmons will make an analysis of it. It would also be desirable to send in connexion with it, a specimen of the marl which it is understood is to be found below the muck. A few pounds of each will answer the purpose.

LOCUST TREES.—A writer with the signature “M.,” in the Providence Transcript, inquires of us whether the locust tree, when set in wood lots, &c., as mentioned in an article in our Nov. number, escapes the attack of the borer. To which we reply, that in western New-York, and we believe in the west generally, the ravages of the borer are mostly confined to locusts which are cultivated by themselves, or such as stand singly, in rows, or small clumps; and we have generally noticed that those were most attacked, which stand in villages or towns. We know this is particularly the case in many parts of Ohio, though in the country or in forests, the tree is entirely free from the insect. Why the borer should confine itself in this manner to trees in towns or open grounds, we are unable to say. No successful mode of preventing its attacks, has yet been discovered, so far as we have learned.

MELONS.—A correspondent, “W.” at Troy, inquires whether there is a species or variety of the Musk-melon, adapted to this climate, called “*pomegranate*”—and also if citron melons are valuable for any other purpose than preserving. We do not know of any melon by the name of pomegranate—If any of our subscribers know such an one, we would thank them to inform us. The common citron melon, of the water-melon tribe, is not, that we are aware, useful for anything but making sweet-meats; but we have seen a fruit of the *musk*-melon tribe called a citron, which is very good to eat. There is an inconsistency in giving the same name to two fruits of different species, and so opposite in their qualities.

INQUIRY.—We shall feel obliged if some of our correspondents will answer the following inquiry, proposed by Mr. W. J. POWELL, of Marshall, Michigan. “Our opening lands, which are a rich gravel loam, and are *admirably adapted to the growth of wheat and other grains*, will not raise more than *half a crop* of grass; notwithstanding, clover and timothy are very tenacious and next to impossible to remove from the land, after becoming once well soded. What, in your opinion, would be the proper course of treatment, to make them yield a good burden of grass ?"

CARE OF ANIMALS IN WINTER.

In the cold climate of the northern section of our country, buildings, of some kind, are required for sheltering all domestic animals, and in general we think all should be fed under cover, or in yards attached to barns and sheds. There is much less waste in this way, and the animals are much more quiet and comfortable than when the food is thrown out in the dirt, and they are forced to eat under the exposure of wind and storm. In dry, cold weather, when the air is still, sheep may be sometimes foddered on clean, hard snow to good advantage—they will eat fodder here which they would refuse any where else. But it is only in dry weather that they can be fed in this way—as soon as the snow softens, or the weather becomes moist, they will not eat their fodder clean, out of doors, and they must be fed from racks or mangers in the house. Sheep do not like *wet*—they always prefer to keep both their food and their bodies *dry*.

Large flocks of sheep should be divided, putting the bucks and wethers together, the ewes in another lot, and the lambs and weak sheep in another. Subdivisions of these may be necessary, for too many must not be kept together. Some very good sheep-farmers think not more than a hundred should be allowed to run together—others allow more—but much depends on the room given them, the facilities for feeding, sheltering, &c. A *hospital* should be provided—self-interest, as well as humanity, demand it—and attention to the sick and feeble will be well repaid. A little nursing at the proper time often has such a magical effect on the invalid, that he comes out in the spring as brisk and hale as the best of the flock—a much more gratifying sight, truly, than to see his carcass hanging on a tree for the crows to pick.

If it is designed to raise early lambs for market, the ewes should be at once provided with warm, dry shelter, and fed with a little grain, and some roots, such as potatoes, turneps, or beets. This will ensure a strong, healthy lamb, with plenty of milk to feed him.

Cold weather gives cattle and other stock sharp appetites, and this is the best time in the winter to feed out poor fodder. Give it to the stock in small quantities at a time, replenishing the mangers as often as they are cleaned, till the animals get their fill. It is not good policy to make *milch cows* eat too much poor fodder—it had better be fed mostly to the young cattle—such as steers and two-year-old heifers.

Considerable advantage is sometimes derived from cutting fodder with a machine. Clover hay and straw, cut fine and mixed together, may be fed in this way without waste. Corn-fodder, if the stalks are small and well cured, will all be eaten if it is cut pretty fine. But it is not so with *large* stalks, which are very coarse and fibrous, and the sap of which becomes *sour* before they can be cured—cattle will not eat such much sooner than they would eat their hoofs. It is of but little use to cut stuff for cattle to eat which is absolutely *uneatable*. It is true that animals will sometimes reject long fodder which is really nutricious, and which would be eaten if passed through a cutter; but the idea should never be taken from this, that cutting substances which are little else than woody fibre, will convert them into proper food for animals.

In the western section of the country, where large herds are kept, sheltering and feeding under cover is attended with more inconvenience; but we are satisfied that the extension of the practice even there, would be followed by advantages more than counterbalancing the trouble. There is a great difference in the management of farmers in that region—the contrast between good and bad farming being as strikingly shown there as anywhere else—but it is often the case that the stock is permitted to range at will over the whole farm. The loss which is sustained from the waste of food, the injury done to the land by the treading of the cattle when it is wet and soft, and, as a matter of course, the great waste of flesh in the animals, is incalculable. The practice of feeding cattle almost entirely on corn-fodder, which in that country is very long and coarse, is quite an obstacle to barn or yard feeding; but where this cannot be adopted, the stock should be fed on dry lands, with, if possible, a strong, blue-grass sod, and by all means sheltered from the bleak and cutting winds, by a forest or belt of trees.

IMPROVEMENT OF FARMS.

The Middlesex (Mass.) Ag. Society awarded the first premium for the best managed farm to Oliver C. Rogers, of Woburn. It appears from the account given by the chairman of the committee, Nahum Hardy, Esq., appointed to examine farms, that when Mr. Rogers came into possession of his farm, about seven years ago, it was much out of order—the fields were unproductive, and in many places so wet that they could not be plowed in spring early enough for planting. He dug deep ditches to drain the land, stoned them up, and covered over with flat stones—leaving the covering from sixteen to eighteen inches below the surface. He has dug, stoned, and covered over 360 rods of these "blind" ditches. The committee say—"the crops speak well for the improvements in these fields." In most of this swampy land, there is a hard subsoil, in others a deep mud. Mr. Rogers has reclaimed within seven years, more than forty acres, which was very rough and unproductive, when he took possession of the farm. He has also built more than nine hundred rods of stone wall, sixty rods of which is heavy faced wall, "beautifully pointed with cement." He has made various improvements in his buildings, and the committee add, "has constructed a good cellar under his barn for the manufacture of compost manure, being convinced that no good farmer should be without one." Besides these improvements, Mr. Rogers has set out peach and apple orchards, and has carried from his fields and buried in low places and mud holes, about two thousand loads of stone, within the seven years.

Compost Making.—The same committee which made the above award, made a report in relation to the manufacture of compost manures. They mention that one of the competitors, Mr. Fay of Marlborough, burns hussocks from bog meadows, and mixes the ashes with loam and barn-yard manure. Another man, Mr. Chaffin, of Acton, is in the habit, every morning in summer, of throwing a mixture of sand and muck, over the manure dropped by the cattle the preceding night.

Mr. Moore, to whom the committee awarded the premium for the best mode of manufacturing composts, stated that his attention was first particularly called to this subject about five years since. About that time he built a barn, 80 by 40 feet, with a cellar under the whole of it, and began making compost. He keeps seven cows, one bull, two yoke of oxen, and two horses, which are tied up in the barn every night to save the manure. In addition to the above, he winters from twenty to twenty-five head of young and fat cattle. He keeps hogs in his barn cellar. The method which he prefers, is, to keep always at hand plenty of good loam and peat mud, both in the cellar and barn-yard. This is placed in the cellar under the holes where the manure from the cattle is put down, and after remaining there about a week, it is spread over the hog-sties in the cellar, which are 80 feet long by 24 feet wide. Before spreading the loam or mud, corn is sown over it, which induces the hogs to root and turn the whole over. Mr. Moore thinks the urine of cattle is as valuable, when properly applied, as their dung. He thinks urine of so much consequence that he places barrels in his sheds to receive that from the house, which is afterwards emptied on the manure heaps. Plank troughs, set on runners, are placed under the privies, and when they are partly full, are drawn away and mixed with loam and mud.

The committee, in conclusion, suggest that there is no necessity of going to France for poudrette, or to the Pacific for guano, as farmers can manufacture these, or their equivalents, at less than half the cost of importation.

INQUIRIES RELATIVE TO FRUIT TREES.

A correspondent makes the following inquiries:— "Assuming that a proper soil has been selected, according to the Jan. No. of the Cultivator, 1844, p. 37, on which to raise various kinds of fruit trees, such as the apple, pear, peach, plum, and quince, I would inquire,

1st. What is a good method of preserving the different kinds of seeds for planting ?

2d. What is the proper time for planting ?

3d. The proper depth for covering ?

4th. How near each other may trees stand until budded, or grafted ?

5th. Smallest size proper for budding or grafting ?

6th. Do any of the above varieties ordinarily require protection in winter ?

7th. If after suitable care in the selection of the hardiest buds for insertion, any fail, what shall be done with the stocks next season ?

8th. If any of those failing are cut or headed down, when shall it be done ?—that is with respect to the age of the tree and season of the year ?

9th. Proper time for transplanting seedlings ?

10th. What shall be done with the tap root ?"

ANSWERS.

1. The best way to preserve the seeds of fruit trees, is to mix them with pure or clean sand, as this prevents their drying if it is kept moist, and also prevents their moulding or fermenting, which often takes place when moist seed lie some time in actual contact with each other. The seeds of stone fruit should not become much dried internally—the outside should only be exposed long enough to the air to evaporate external moisture and prevent moulding, when they should be packed in sand.

2. The best time for planting is autumn and spring. If they are well packed and exposed to the weather, so that their external coats may be split with freezing and thawing, spring is as good as autumn, and sometimes better, as the seeds if planted in autumn are sometimes destroyed by mice or otherwise, from which they are more easily protected if remaining in a mass, unplanted, till spring.

3. The depth of covering, as well as in most other seeds, must be regulated chiefly by the size of the seeds, and the nature of the soil. Small seeds, as of the apple and pear, may be an inch or less deep in a heavy soil, and one and a half to two inches deep in a very light soil. Peach stones, (which, if uncracked, come up mostly the second year from planting,) may be from two to four inches deep, varying with the soil, and cherries and plums, one or one and a half to three inches.

4. Where land is plenty, and trees scarce, they may stand nearer than where the reverse is the case. Before budding or grafting, as well as afterwards, they will grow faster and make finer trees, if not crowded in the rows. If not budded or grafted till the second year, they may stand an inch or two apart, to be set out to six or eight inches or more after the first season's growth; but if budded the first summer or grafted the next spring, they should be six inches apart at first. The rows, if only hoed between, may be one to two feet apart the first season; if plowed, they should be three or four feet apart.

5. The smallest size of the stock for budding must depend somewhat on the size of the shoots whence the buds are taken. Buds from very large shoots cannot be well inserted into stocks smaller than themselves. As a general rule, however, half to three-quarters of an inch is a very good size for budding. For root (whip) grafting, trees may be one-quarter of an inch in diameter. For cleft-grafting, they are convenient, if from three-quarters of an inch to an inch and a quarter.

6. The above named kinds of fruit are generally hardy throughout the northern States, except the peach. Some of the varieties of the latter, especially of the earliest, are tender. The best protection in winter, is to plant them on soils least liable to frost. In parts of the country inclining to be hilly, other things being equal, the hill-tops are best and the valleys worst, as the latter become soonest warmed by the hot sun, and the trees are driven forward earlier in spring, and continue to grow later in autumn; while the sharper frosts to which such valleys are liable, still increase the difficulty. A wet subsoil is also detrimental. Mucky land, also, by radiating heat more rapidly, is more liable to frosts, than dry compact soils. Deep lakes, which do not freeze in winter, afford great protection to tender fruits, by softening the severe cold of the winter's air. All these things are to be taken into consideration in setting out tender fruit trees.

7. When buds fail, the stocks may be re-budded. Peach stocks, for this purpose, should be cut down to the ground, that fresh and vigorous shoots may spring up, all but the largest of which from each root, should be carefully removed.

8. The best time for thus heading down, is early in the spring of the year. It should be done when the tree is not more than two or three years old.

9. Seedlings may be transplanted both in spring and autumn.

10. The tap root should in all cases be cut off a few inches below the surface, so as to throw out horizontal roots only.

Our correspondent also inquires if "it is a good plan to stop the growth of trees in autumn in moist places, where frosts are expected ?" We do not understand this question. The only way to avoid the effects of frosts on tender trees, is to plant the trees where the frosts are least severe, and where the trees, from exposure to winds, &c., and by growing in a moderately fertile soil, will cease growing and harden their wood early in autumn.

He also inquires if the small crook in trees at the surface of the ground, occasioned by the sprouting of the seeds before planting, will seriously affect the value of the tree ? It will not; especially, if in transplanting, the crook is placed beneath the surface.

WINTER EVENINGS.

THE favorable opportunity for reading and study, afforded by the long evenings of this season of the year, it is hoped will be duly improved by farmers. The school libraries which have been provided in several of the states, furnish to all an excellent means of acquiring useful information. As the agriculturists constitute the most numerous class in community, we think each of these libraries should contain some books particularly applicable to their profession. It is important that the farmer should acquaint himself, as thoroughly as possible, with the natural laws which constitute the basis of the art by which he obtains his livelihood; and the more his practice is made to conform to these unerring laws, the greater will be his success. Besides studying the principles of his art, the farmer should keep himself constantly advised of the improvements and discoveries in every department of rural economy, which are from time to time made. The readiest, and indeed almost the only medium of acquiring this information, is AGRICULTURAL PAPERS. They may be regarded as furnishing an opportunity for a mutual interchange of ideas on the various subjects of practical husbandry. They present in fact, to every farmer a medium for *conversing* with the most intelligent and successful of those engaged in the same occupation, in all parts of the country. The views of all may be obtained, compared, examined, and modified, to suit the particular circumstances of each individual—an opportunity which is almost equivalent to making a personal visit to each correspondent. What an extensive field, for instance, for this interchange of opinion, and the acquirement of information, is presented through the medium of the CULTIVATOR, with its THREE HUNDRED correspondents, (which it actually had during the last volume) scattered over every state in the Union, besides several from the British North American Provinces, the West Indies, and a number of regular contributors from Europe! And for the sum of only *one dollar*, all the valuable knowledge thus collected for one year, is to be obtained! It is scarcely possible that there is a single farmer in the country, who, being fully aware of the importance of the subject, and the advantages to be thus derived, would lose a moment's time in becoming a subscriber to THE CULTIVATOR.

PRODUCTS OF THE DAIRY.

We trust that no apology is needed for calling the attention of the public to the importance of this subject. The production of butter and cheese is not a matter in which farmers alone are interested, but one which concerns every individual almost without exception, in whatever section of country they may reside, or in whatever occupation they may be engaged; for of the entire population of this country, very few can be found who are not either producers or consumers of these articles. True, there is occasionally to be found a person who has so little taste for good things as not to appreciate the luxury of a *bit* of good cheese, or the almost indispensable accompaniment of every meal, a nice ball of butter, and it is to be feared that in the larger towns, families might be found who have not the means to purchase these articles. The poor man in the country, however limited his means, and to whatever extent he may be deprived of the delicacies and refinements of life, nevertheless keeps his cow and usually his pig also; thus providing himself with that which cannot always be obtained by even the wealthy in our large cities, *pure milk and good sweet butter*, while with the addition of a little meal or a few potatoes, the pig contributes in a great degree to the more substantial provision of the laborer. No wonder then that that observing and shrewd writer, Colman, should descant so agreeably on the pleasures to the poor man, of keeping his cow and his pig.

The farmer has this advantage over all other classes, he can appropriate the choicest of the productions of the soil and of the dairy for his own consumption, thus enabling himself and family to enjoy the first and best fruits of honest labor, and, well directed industry and skill. To no branch of agriculture does this remark apply with greater force than to the productions of the dairy. Unfavorable circumstances may injure the quality of the butter or cheese sent to market, but nothing need prevent the farmer from partaking of the best which the skill and care of the dairywoman can furnish. We design in this article simply to call attention to the subject, and to prepare the way for some remarks in a future paper; when we hope to be able to show to farmers the importance, the necessity indeed, of great improvement in the quality of their dairy products, and to prove to them that a very great increase in the average quantity per cow can profitably be effected. Indeed, when we consider the great defects which exist in the quality of much of the butter and cheese now manufactured, and the comparatively small quantity from each cow which is made in many of the dairies, we are forced to the conclusion that in few branches of agricultural or household duties, is there more need of improvement.

There seems to be but a comparatively small portion of the country which is well adapted to dairying. A soil suitable for the production of the proper grasses; a climate of the proper kind for the manufacture and preservation of the butter and cheese; an abundant supply of pure water; cool and dry cellars in which to preserve the butter in good condition; all these, and many other things, must combine to constitute a good dairy district. Several counties bordering on the Hudson river, would seem well adapted to this object; and the high reputation of much of the butter made in those counties, proves their adaptation to this business. This limited extent of territory, is however, no more than is needed to supply New-York and other large cities with milk, and to some extent, with butter for family use in the summer months. The same remark will also apply to that portion of Pennsylvania at no great distance from Philadelphia. In addition to the supply of milk and butter for family use, the counties contiguous to large cities must give the finish to the fattening of the great proportion of the cattle which are required for supplying the city with fresh beef. New-England, with her numerous manufacturing establishments, and the employment of her citizens in the various mechanical occupations, consumes vastly more butter and cheese than she produces. Western New-York must always be a wheat growing region; (unless the owners of the soil exhaust it by severe cropping,) and so to a great extent are the western States.

The central and northern parts of the State of New-York, must therefore constitute *the dairy district*, from whence must be derived a very great proportion of the butter and cheese used in our large cities, and which is needed for shipment to Europe. The demand for cheese for this latter purppse, is now considerable, and will, doubtless, greatly increase, if proper attention is given to the manufacture; but it is idle to expect a foreign demand for a poor article. It is then to the dairymen in the district referred to, that this subject presents itself with the greatest force; and we deem it one of sufficient moment to demand attention from our agricultural journals. We propose in our next, to give some statistics relating to the products of the dairy in different sections of the country, and also the quantity exported, as far as such information is within our reach. These facts will not, it is hoped, prove entirely uninteresting to any class of readers, whether producers or consumers.

E. Comstock.

Foreign Correspondence.

MR. NORTON'S LETTERS—No. VI.

Lab. of Ag. Chemistry Association,
Edinburgh, Oct. 30, 1844.

Luther Tucker, Esq.—Since the date of my last letter, I have made an excursion into Ayrshire and Renfrewshire. I accompanied Prof. Johnston, who went for the purpose of delivering four lectures in Ayr. He has, on at least one occasion before, addressed the Ayrshire farmers, and so pleased and benefited were they, that they invited him to come again and give them a somewhat more extended view of the great subject of the application of Chemistry to Agriculture. In compliance with this invitation, was the present visit. I will give a brief sketch of the plan and subjects of the Lectures.

The first was upon the organic part of plants. This organic portion of all vegetable bodies is separable into starch, gluten, woody fibre, gum, sugar, &c. By the simple experiment of burning sugar, one of these bodies, it is shown that it resolves itself into carbon or charcoal and water; the same is true of woody fibre, starch, and a great proportion of vegetable bodies. The properties of charcoal were explained, and the two gases of which water is composed, oxygen and hydrogen, were exhibited through their more striking phenomena. In gluten and other vegetable bodies, we have a fourth ingredient, nitrogen; this was also shown, and the method of its formation explained. We see then that the organic, which is far the larger portion of plants, consists of four substances, carbon, hydrogen, oxygen and nitrogen. Plants collect these indispensable materials in various ways; the carbon chiefly through the leaves in the form of carbonic acid gas; oxygen and hydrogen through the roots, a great proportion in the form of water, and the nitrogen through the roots, also in the form of ammonia, or other compounds. The decay of various substances, and the vegetable acids present in the soil, also supply a certain amount of *all* these bodies.

Lecture 2d, was upon the inorganic part of plants and soils. When we burn a quantity of vegetable matter, far the greater proportion is driven away, but something always remains. This, though a small part of the whole, is indispensable; it is as absolutely essential as the glue or nails of the carpenter, or mortar of the mason; plants cannot live long entirely without *some*, though the proportions in which they require it, vary. This inorganic portion consists of eleven substances: potash, soda, lime, magnesia, alumina, oxide of iron, oxide of manganese, silica, sulphuric acid, phosphoric acid, and chlorine; other things are rarely present. The organic portion is derived chiefly from the air, but partly from the soil; but this comes wholly from the soil. Every fertile soil then must possess the above constituents, and a soil which does not, will not grow good crops. If rich in all of the others, but deficient in one, lime for instance, it will not nourish a healthy grain or root crop. Thus we may have a soil that may at once be made fertile, by the addition of some one absent ingredient. Here chemical analysis comes to the farmer's aid, and is able to tell him the best and most economical method of improvement.

Lecture 3d, pointed out the ways by which the soil is to be improved. Although, as has been stated, some soils only require the addition of a special ingredient to bring them at once into a state of fertility, others are in need of many things. In many instances a soil contains every thing necessary for the nourishment of plants; but will not grow them on account of its physical condition; there may be a superabundance of water—this is to be removed by means of the drain; there may be some excess of acid or noxious mineral substance—these too are to be removed by drains, put in, not because of wetness, but that the rain may descend quickly into them, and carry these substances away with it. Great benefit is also to be derived from thorough stirring and pulverization of the soil, to the greatest possible depth. Sometimes the subsoil is more fertile than the upper, and may be brought to the surface with much advantage. Green cropping, is another most valuable and economical means of improvement. Vegetable matter is thus supplied at the expense of the atmosphere; and the long roots bring up inorganic substances from the subsoil. If we do not return to the soil, both the liquid and solid manure from animals, we do not return all that we have taken away, and it will sooner or later show a deficiency.

Lecture 4th, treated of the purposes to which the crops raised are applied, that is, to the food and sustenance of animals. We find that the muscle, blood, and bones of animals also consist of an organic and inorganic part. This organic and this inorganic part, respectively contain the same constituents as the corresponding parts of the food, and not only of the food, but of the soil: here, then, we have a complete and beautiful chain. The soil and the air build up the plant, the plant builds up the animal frame. The food having fulfilled its purpose in the nourishment of the animal, is rejected, returns to the earth again, and commences its round anew. With a knowledge of the constituent parts of the animal, we are able, having the same knowledge of the vegetable, to adapt our food to the purpose required. To the growing animal we would give food, rich in phosphates, to build up bones, in gluten to form muscle; to the fattening animal, we would give in addition, something rich in oil and fat. These things are all ready formed in the plant; in fact, it is a workshop to prepare materials for rearing and supporting the body; our part is the selection alone.

The above necessarily imperfect outlines will give an idea of the plan and scope of these lectures. The room in which they were delivered, was each day well filled; and on the last day, some persons were compelled to stand. Sir Charles Ferguson of Kilkewan, presided at the two first lectures, the Lord Justice General, at the 3d, and Mr. Campbell of Craigie, at the 4th. The expression of gratification was universal. In his conclusion, Prof. Johnston made some most excellent remarks upon the necessity of caution in our advances. Many men of science even, have launched off into wild theories, and greater injury results from those, who with an imperfect knowledge of the subject, boldly arrogate to themselves the office of teachers, and by erroneous results and conclusions, not only lead others astray, but throw discredit upon the whole science. Our consolation is, that truth will outlive these wounds of purblind friends, and will prevail at last.

During my journey, I was favored with opportunities to visit several of the fine Ayrshire farms; and propose to give some account of them in my next.

Very truly yours, JOHN P. NORTON.

FOREIGN INTELLIGENCE.

By the Hibernia, arrived at Boston on the 21st ult., we have received our usual files of foreign periodicals to the 2d ult.; but have but little time to examine them before our paper goes to press. We notice that great preparations are being made for the great show of fat stock at Smithfield, which was to commence on the 11th December. We shall probably obtain full accounts of it for our next number. The subject of allotments, and of the repeal, or modification of the outrageous game laws, are now creating much discussion in England, and progress seems to be made towards the accomplishment of both these objects.

The English papers announce the death of Lord Western, of Felix Hall, Essex. He was in his 78th year. He was a devoted patron of agriculture, and as such, his name will long rank with those of Spencer, Coke, and others of his country. His farm has for several years been a leading object of curiosity with the agricultural tourist; and a welcome and ready hospitality was always extended to those who called to inspect either the farm or the mansion. He was never married, has no brothers, and the title is said to be now extinct.

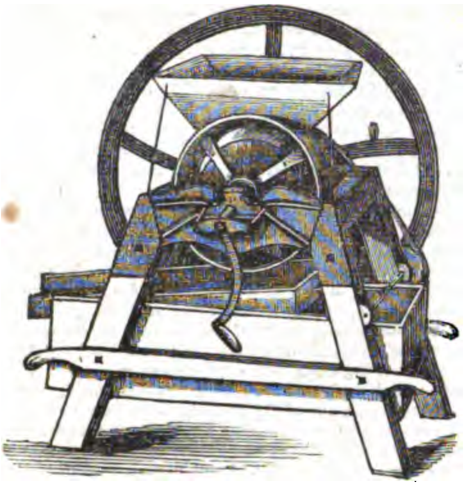
Prince Albert's annual sale of Live Stock.—This great sale, which lately took place at Windsor, attracted, as on former occasions, great numbers of butchers and salesmen. From the prices obtained, we should suppose the bailiff might be able to carry out the instructions which it is said were given by his Royal Highness when he undertook the management of the farms, viz. to "*be sure and make them pay.*"

Hereford Cattle.—Mr. John Walker, of Burton, the famous breeder of Herefords, who is just removing to another farm, recently sold a portion of his stock. The sale begun with the cows and two year old heifers, some with calves and some in calf. These realized high prices, ranging from 20*l* to 58*l* each; the yearling heifers sold equally well, fetching from 18*l* to 35*l* each, and weaning calves from 10*l* to 27 each.

Grazing Stock.—At the late exhibition of the East Cumberland (Eng.) Agricultural Society, Mr. Ellison, one of the judges of stock, made some good practical remarks on the proper form and qualities of domestic animals. He said he had been a grazier for a number of years, and the result of his experience was, that a short backed, short legged animal, and one that would do with a short bite, was best, and would be found soonest fat for the butcher. There had been a very great improvement in the breed of sheep within the last forty years. Leicesters were now much run upon, and the reason was, that they were a short, compact animal that would suit any bite, and be made fit for the butcher in a short time. The great object in rearing stock as well as crops, was that the capital laid out should be returned as speedily as possible. In respect to pigs, there were certainly some good animals shown, but in his opinion, the object to be aimed at in raising improved breeds of pigs, was to give them smaller bones and larger carcases.

Visit of Professor Liebig to England and Scotland.—The distinguished chemist and physiologist Liebig has lately visited Great Britain. A public dinner was given him at Glasgow, at which the Earl of Eglinton presided. The chairman, in a complimentary speech, proposed the health of Professor Liebig, to which the Professor replied in an appropriate speech, that was received with much approbation. Professor L. received several other invitations to public dinners, which, on account of his short stay, he was obliged to decline. In his speech at Glasgow, the Professor, speaking of the advantage of science with practice in agriculture, observed—"Practical experience possesses unquestionable value; but it is like a vessel, to which, in the form of science, the compass, or the pilot, is wanting—it is a treasure which cannot be inherited. Science enables us to bequeath this treasure to our children, and it enables our children to increase the store. Science gives us the consciousness of our strength, and thus inspires us to recognize the food of plants, and the sources from which it is derived. This knowledge alone makes us the true masters of the soil—the lords of our capital. We can now see where we are guilty of waste, and where we are too sparing. The great truth that animal manures are nothing else but the ashes of the food produced from our fields, consumed or burned in the bodies of animals, has given the chief direction to all modern improvements in agriculture. The mineral food of the plants of all countries must be ascertained by analysis of their ashes."

☞ Some experienced cheese-makers in Nottinghamshire, are adopting the practice of adding churned milk to the usual cheese milk, which is said to very much improve the quality and taste of cheese, and prevents its rising after it is made.



R. SINCLAIR JR. & CO'S PATENT CORN MILL—(Fig. 2.)

THE machine represented by the above cut, is admirably adapted to plantation use. It makes coarse or fine meal with equal facility, at the rate of two and a half to three bushels per hour. When the screen is attached, (as shown in the centre of the cut,) and fine meal is required to be ground, it will be necessary to drive the mill by horse power, say two horses. Coarse meal for horses, may be ground by two men with good success. The grinding plates are made of the hardest composition metal, and will last about two years. A feeder is attached to the axle, which is intended to pass the grain into the plates at regular intervals. This feeder is important, and obviates the objection to cast iron mills generally. The feeder and grinding plate are represented separately from the mill, in figs. 3 and 4. Price of the mill with a set of extra plates, $40. Manufactured by R. SINCLAIR JR. & Co., Baltimore.

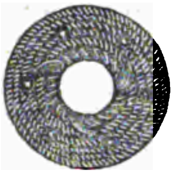


Fig. 4.

Fig. 3.

EXPERIMENTS IN THE CULTURE OF INDIAN CORN.

We are indebted to our friend GEO. GEDDES, Esq., of Onondaga county, for the following detailed account of several experiments made by him, with great care, the past season, in the culture of Indian Corn. They will be read with interest, and our readers will be glad to learn that these experiments will be continued with the same exactness the ensuing season. Mr. GEDDES says:

The SOIL is a deposit of gravel mixed with sand and clay, resting upon a gypseous shale. The previous course of cultivation has been as follows, viz:—In 1837, a crop of corn was raised on a heavy sod turned under that spring, and slightly manured with barn-yard manure. The yield was estimated at 65 bushels to the acre. In 1838, corn was again raised, and without any manure; estimated to yield 50 bushels to the acre. In 1839, it was sown with oats, and yielded a very heavy crop. Grass seed was sown with the oats, which succeeded well. The next four years it was pastured. Plaster was put on both corn crops, and on the oats, and once or twice on the pasture.

The ground was plowed about the first day of May, six inches deep, and planted on the third and fourth days of that month.

The variety of corn was the improved Dutton; that is, Dutton that had been selected from the earliest ears for a series of years.

EXPERIMENT No. I.

One acre was planted in hills three feet apart each way, six kernels in the hill. Fifty loads of half rotted manure, was put on this acre, after it was plowed, and harrowed in as well as it could be done; it being so coarse that it piled up a great deal before the harrow. The hills had a hoe full of the best of the manure drawn in by the planter, and the corn dropped into it. It was hoed twice, and a cultivator was run once along each row *both ways*, at *each hoeing*. The account of the cost of cultivation, is as follows, viz:

To plowing and harrowing one acre,	$1·50
50 loads of manure, drawing and spreading,	12·50
2 days work of one man planting,	1·50
cultivating for both hoeings,	·50
hoeing twice, 3 days work,	2·25
harvesting, 3½ days work,	2·63
	$20·88

The product was 70½ bushels—at 4s=$35.25—20.88=$14.37, for the use of the land; or the corn cost, besides the use of the land, $0.29,6 per bushel.

EXPERIMENT No. II.

The other acre was cultivated as follows—One-tenth was planted in hills three feet by two feet apart, six kernels in a hill, and *without any manure*. The account of the cost of cultivation is as follows, reduced to acres.

To plowing and harrowing one acre,	$1·50
planting 2 days,	1.50
cultivating,	·50
hoeing twice, 4½ days,	3·37
harvesting 3 days,	2·25
	$9·12

The product was sixty and one-quarter bushels to the acre, at 4s=$30.12—9.12=$21.00 for the use of the land; or the corn cost, besides the use of the land, $0.15,1 per bushel.

EXPERIMENT No. III.

Another tenth was planted the same distance apart, and the same number of kernels in the hill as the last—and was manured, by filling each furrow, as it was plowed, full of barn-yard manure, *unfermented*—the amount used being at the rate of 150 loads to the acre. The cost of production was as follows, reduced to acres:

To plowing and harrowing one acre,	$1·50
2 men to fill the furrows with manure,	1·50
2 days work planting,	1·50
4½ days hoeing,	3·37
cultivating,	·50
3 days harvesting,	2·25
150 loads of coarse manure,	18·75
	$29·37

The product was seventy bushels to the acre, at 4s=$35.00—29.37=$5.63 for the use of the land; or the corn cost, besides the use of the land, $0.42 per bushel.

EXPERIMENT No. IV.

Another tenth was the same distance apart, and the same number of kernels in the hill as the last, and manured with coarse manure in the same way, and had beside, a top dressing of half rotted manure, at the rate of twenty-five loads to the acre. The cost of production was as follows, reduced to acres:

To plowing and harrowing one acre,	$1·50
150 loads of coarse manure,	18·75
25 " fine "	6·25
2 days work to put manure in furrows,	1·50
2 days planting,	1·50
4½ days hoeing,	3·37
cultivating.	·50
4 days harvesting,	3·00
	$36·37

The product was eighty bushels to the acre, at 4s=$40.00—36.37=$3.63 for the use of the land; or the corn cost $0.45,5 per bushel, besides the use of the land.

EXPERIMENT No. V.

Another tenth was planted in drills, three feet apart, the corn four inches apart in the drills. It was manured with 25 loads of half rotted manure, to the acre, put on after the plowing. The cost of production was as follows, reduced to acres:

To plowing and harrowing one acre,	$1·50
25 loads of manure,	6·25
drilling in seed 4 days,	3·00
two hoeings, 3 days work each,	4·50
cultivating,	·50
harvesting (small ears) 4 days,	3·00
	$18·75

The product was fifty-five bushels to the acre, at 4s=$27.50—18.75=$8.75 for the use of the land; or the corn cost $0.34 per bushel, besides the use of the land.

EXPERIMENT No. VI.

The remainder of the ground was planted in hills three feet by two feet, six kernels in the hill, with a top dressing of twenty-five loads of half rotted manure to the acre. The cost of production was as follows, reduced to acres.

To plowing and harrowing one acre,	$1·50
25 loads of manure,	6·25
2 days work planting,	1·50
4½ days hoeing,	3·37
cultivating,	·50
3¼ days harvesting,	2·44
	$15·56

The product was sixty-five and one-half bushels to the acre, at 4s=$32.75—15.56=$17.19, for the use of the land; or the corn cost, besides the use of the land, $0.23,7 per bushel.

It is proper to say, that the cost of labor for such small parcels, is a difficult thing to determine with perfect accuracy.

The stalks being of such equal value upon each piece, I have supposed it unnecessary to attempt any separate measurement; neither have I kept any separate account of the cost of the seed, for the same reason. The whole was plastered, but the expense being so slight, and costing the same for each piece, no account has been made of it. The manure is charged at its full value in each case, though the land is greatly benefited for future purposes. Hardly a quarter of its cost is justly chargeable to this crop. In No. 2, we have an example, in which the effects of the manure are easily traced through many years. The last manuring this piece had was in 1837—and it now produced 60¼ bushels to the acre. No charge being made against it for manure, it appears to be profitable above every other experiment. But if the account could be stated for a period of years for each piece of land as we have it for this year, I doubt not the manure would be found to pay fully all its costs.

These experiments were made chiefly to determine *how thick* corn should be planted—what is the *most convenient form to place the plants*—and whether the manure should be rotted and applied to the surface, or plowed under unfermented. The conclusion that now appears likely to be arrived at is, that hills three feet by three feet apart, put in rows, so that a cultivator can be used both ways, is the most convenient form for cultivation, and that six kernels put into each hill, will make the corn thick enough. I counted, and made examinations that satisfied me, that at harvest my hills averaged five stalks to the hill—no thinning was done, except by insects and accidents. That this is not too thick, is proven by experiment No. 6, where the hills were three feet by two feet, the product being 65½ bushels to the acre, and with one-half the manure that was put on No. 1, which was three feet by three feet apart, and the product only five bushels more to the acre. In fact, I believe that more bushels with the same manuring would have been raised with the hills two by three feet, than three by three feet, but the extra labor of planting, hoeing and harvesting, will more than counterbalance the gain.

The labor required to plow under *unfermented* manure in any considerable quantity, is so great, and its great bulk compared with its value, making it so expensive to draw, and the fact that it is not felt until late in the season—and that the next plowing must be deeper, in order to bring it all up and mix it with the soil—are great objections to its use. That the next plowing must be deeper, in order to bring up all the manure, is evident from the consideration that every time the soil is saturated with water it must sink deeper, unless it is held up by some stratum that is impervious to water. If the contents of the barn-yard are piled up in the spring as soon as the frost is out, and covered with gypsum so as to prevent the escape of any of its gases, and turned and re-piled at midsummer, and again covered with gypsum, the seeds of weeds will be destroyed, and the manure will be entirely rotted in time to put on the corn the next spring. The manure used in these experiments was but half rotted in consequence of neglecting to turn and re-pile it. From the decrease of the bulk, the expense of handling and mixing the manure with the earth, will be so much lessened as fully to compensate for all the expense of piling and rotting it.

The cost of the gypsum, too, will be but slight, as but little is required; merely enough to whiten the heap. The corn will then have its stimulus at the time it needs it most; and but few weeds will spring up from the manure. All these considerations lead me to prefer fine manure to coarse.

It is worthy of remark that in No. 2, where no manure was used, that the yield was 60¼ bushels—in No. 3, where 150 loads of unfermented manure were used, the yield was 70 bushels—a gain of 9¾ bushels to be ascribed to the manure; in No. 4, with the like amount of unfermented manure, and 25 loads of fine manure, the product was 80 bushels—a gain of 10 bushels to be ascribed to the fine manure—showing that one load of fine is worth more than six loads of coarse manure. While No. 6, which was manured with the fine only, yielded 65½ bushels—a gain of 5¼ bushels to be ascribed to the same amount of fine manure. Showing that one load of fine is worth about three and a quarter of coarse manure. But the land on which No. 6 was raised, was not as rich as Nos. 2, 3 and 4, owing to the fact that it was so situated in the field that it had not been as highly manured in those years gone by, when manure was only drawn out of the barn-yard "to get rid of it." Nos. 2, 3 and 4, were nearer the gate, and had been served about alike, and furnish the fairest test of the value of the different kinds of manure.

Some of the results obtained by these experiments were unexpected. The highest yield is very far below the great crops that have been reported. I know not why a hundred or more bushels to the acre were not raised on No. 4, with manure both on top and under the furrow, amounting to 150 loads of coarse and 25 loads of fine to the acre; and that too, along side of land that *without any manure*, yielded more than 60 bushels to the acre.

I purpose the next year to plant all of this ground with corn, and carefully measure the product of each piece, with a view of learning the effects of this manuring for the second year. GEO. GEDDES.

AGRICULTURAL INSTRUCTION IN SCHOOLS.

WE have seen several notices in our foreign papers, of a lecture recently delivered by Professor Johnston before a convention of school-teachers and others, on the subject of the introduction of agricultural instruction into the elementary schools of Scotland. As this subject has of late attracted much attention in this country, a portion of the remarks of Prof. J., who is deservedly considered one of the most practical among the distinguished scientific men of the age, will be read with peculiar interest.

In the course of his lecture, Prof. Johnston observed that he had previously had some doubts of the expediency of introducing this kind of instruction into these schools; but after hearing, at Glasgow, the examination of some boys from the Irish National Schools, all his scruples had been removed.

In relation to what should be taught, the Professor remarked, that

"Agriculture divided itself strictly into three branches; 1st, the culture and improvement of the soil; 2d, the rearing and improvement of stock; and 3d, the use and improvement of agricultural implements. Now, their teaching, that might be of two kinds—theoretical or practical, or both. He would come to the consideration of both. He thought that in elementary schools, they might easily inculcate and impress on the minds of the youth under their care, the principles upon which the culture of the soil ought to be based. Of the sciences on which these principles depended, chemistry was the most important, and it was necessary, therefore, before they could teach the young mind, that they should give a knowledge of so much elementary chemistry as to make him understand the words used by chemists. It was not enough that he should know such names as soda and potash—he should also know the difference between them. They must not teach any one science for its own sake, but as an important branch of national industry. They were to make their pupils—not chemists—not botanists, but scientific farmers, for in that the public were interested and would support them. As to the experiments they would find it necessary to make, they were few and very simple. For instance, here was the carbonate of soda in one glass vessel, and the carbonate of lime in another—take and pour spirits of salt on them, and they would observe carbonic acid gas arise, which extinguished a lighted taper when put into the vessel. They would also perceive that the smoke of the extinguished taper floated on the top of the gas, thereby showing how much was in the vessel. This gas, they were aware, performed most important functions; but it was not necessary to give the boy more information than was requisite to fix in his mind the name and property of the gas. Then as to phosphoric acid—here was a piece of phosphorus, which they would observe, when he burned it under a glass, sent up white fumes; all they had to do, therefore, was to tell the boy that those white fumes were phosphoric acid; that the same was in his bones, and in the food which he eats—and he would then easily remember what phosphoric acid was. If they did not happen to have phosphorus by them, they might use lucifer matches, which were easily procured, and which on friction being applied to them, sent up the same sort of white vapor as did the phosphorus which the boy had seen burned. They could also connect carbonic acid with the daily life of the pupil, by telling him that what was produced when charcoal was burned, was what he breathed. He would then go and tell his father that this same substance which he throws off from his lungs, was what the leaves of plants sucked in; that plants took it to form starch, and that animals eat the starch to form it. After making an experiment to show that liquid manure was an important substance if applied to plants, as it greatly promoted their growth, the Professor then went on to say that the more simple the teacher could make his experiments, the better—they should teach no more philosophy than was absolutely necessary; but at the same time, it must be strictly correct. He would advise them to confine themselves to facts, not to announce the principles. He would also press upon them, in endeavoring to fix facts on the boy's mind, to call forth all his senses—his sense of sight for instance. Then as to smell, ammonia might be used; and for taste, common salt, alum and soda, which were perfectly harmless. As to touch, sal ammoniac would be of use. They would observe that the little piece which he had just broken off, bent; and he knew of no other substance which a boy was likely to meet with that would bend in like manner.

As to the expense of making the experiments, it would not amount to more than five shillings a year, as the materials could be procured at a very cheap rate. With regard to the apparatus, all that is necessary could be got for thirty shillings from Messrs. Griffin of Glasgow, who had, at his request, prepared a set of apparatus. Then, as to the time it would occupy to teach the science; why, that was a point on which some misapprehension might readily arise. The boys who attended school generally did so for three or four years. Now all that he asked was one hour a week—that was enough to learn all that was necessary to be taught on the subject; but if they could give him two hours he should like it the better, as then there would be time to spare. The children also would learn much without teaching, from seeing the tables he had alluded to, and also from experiments. He did not wish that this one hour a week should interfere with the usual course of instruction, although it might not necessarily be new or additional time to what was now given to teaching. In fact, he did not wish any of them to teach in one particular way or another—he left that to themselves, merely taking the liberty of giving his opinion in the matter. As to the practical teaching of the science, that could be done in various ways. For instance, they might on a Saturday afternoon go with the boys to a farm in the neighborhood and describe the operations of the farmer. After telling them all about the rotation of crops—that a green crop followed after grain and so forth, the teacher might then say let us go now and see how the farmer works. This, he thought, might be of great benefit to the scholars."

SUMMER FALLOWS.

If ancient usage were in all cases to be considered sufficient evidence of the propriety of a practice, the expediency of FALLOWING would not now be questioned. The custom, if it did not originate with the Romans, it is certain was introduced by them wherever they extended their conquests. The practice seems to have originated in an idea that the land, after several years cropping, required *rest*, and that by remaining for one or more seasons without any crop being taken, its exhausted energies would become so far renovated that successive harvests might again be taken.

In England, there are several kinds of fallows, as "naked fallows," and "green fallows." Naked fallowing, as now understood, implies the plowing and cleaning of the land through one season, with a view of better preparing it to produce crops.

By green fallows, is merely meant the cultivation of the land in some hoed crop. In England, turneps, mangel wurzel, or some other root-crop, usually constitute the green fallow. The effect of the latter, is in one respect, that of cleaning the land, the same as the other kind. In the cultivation of the vegetables, the soil undergoes a thorough working, and is deeply perforated and divided by the roots; the tops and leaves thickly shade the ground, so that the combined effect is to pulverize the land and clear it from weeds and fowl growth.

In England, the chief advantage of naked fallows, is thought to be for stiff clay soils, or those which have become foul. The exposure of the soil to the sun, by which it receives a much greater degree of heat than it otherwise would, is by some in that country urged as one of the greatest arguments in favor of the practice. The course there recommended, is to begin in the fall, as soon as the crop for the season is removed; first throwing the ground into ridges in such a manner as to turn off the water as quickly as possible; in which state it is left for the action of the winter frosts. The next spring it is crossed plowed, and subsequently worked over as often as is necessary to secure the requisite degree of pulverization and mellowness, and the entire extirpation of grass and weeds.

The growth of weeds and grass—particularly couch grass, (*Triticum repens*)—is frequently a serious obstacle to the cultivation of grain crops; and where the root-culture, as it is called, either from the nature of the soil, or other cause, cannot be practiced, the only effectual remedy seems to be in a *well-managed* summer fallow. One mode which is recommended in some cases for clearing lands of foul growth, and which has also been practiced with much advantage, is to pare off, with an implement called a "breast plow," about two inches of the surface; which after being allowed to dry in the sun, is burnt in heaps on the ground. The operation of the fire destroys all vegetable life—seeds, roots, &c.—and the heaps of sods are reduced to ashes and calcined earth, which are spread evenly over the ground. If the soil is much filled with couch grass, there will remain a considerable portion of the roots, even after two inches of the top have been taken off and burnt. To eradicate these roots, the next step should be to plow the land thoroughly, by fine, narrow furrows. If the couch roots appear very numerous, or the nature of the soil is not adapted to root crops, it will be hardly advisable to put in any crop till the ground is well cleaned. In accomplishing this, an implement called a "grubber," is found useful and effective. It is made something in the form of a triangular harrow, with long curved teeth. It has wheels to regulate the depth, and handles by which it is guided. By the use of this implement, in connection with the plow, when the ground is in a proper state of dryness, the couch roots are drawn to the surface, and may be raked together and burnt. This course constitutes an excellent preparation of the ground for any crop; though it is thought more beneficial for stiff clayey soils, than for light ones. It has been practiced some by Mr. Sotham, on the farm of Mr. Corning, near this city. We shall probably describe it more at length, and speak more fully of its advantages, in a future number.

It is well to observe, that there is a wide difference between a *proper* fallow, and leaving the land as it often is left under that name. Fallowing, as often practiced in some sections of this country, is quite a different operation, and we may reasonably suppose is quite different in its effects, from what is recommended by the English authorities. Though the old idea of giving the land *rest* by abandoning its cultivation for a time, is now exploded with intelligent farmers, yet we have seen fallowing, (or what was called such,) practiced and defended from no more correct idea of its benefits. In grain-growing districts, we have sometimes seen fields half covered with weeds, mulleins, and thistles, and on inquiring the object of that mode of *mis*-management, have been told it was "fallow ground," or else that it was "thrown by to rest." It is difficult to perceive the advantage that can result from a "fallow" which not only exhausts the soil as much as would a crop of grain, but what is worse, instead of *cleaning* the land, is actually encouraging the growth of every noxious plant.

A very common practice in some sections of this country, with those who are considered good farmers, is to plow their grass or sod lands intended for wheat, in the month of May or June, and let them lie, sometimes with, and sometimes without harrowing, till September, or near the time for putting in the crop, when they are cross-plowed, harrowed and sowed. This is done without any particular regard to the nature of the sod turned down—whether a crop of clover was turned in, or it was the tough sod of a sheep pasture, the future course is generally the same. The expediency of this mode of fallowing, may well be questioned in some respects. The objections which have been urged against it, are, that whatever gases are produced by the decomposition of the vegetable matter turned in at the first plowing, are by the second plowing brought to the surface, and dissipated in the air; instead of remaining, as they should, to be taken up as food by the growing wheat. Another objection is, if the sward is not entirely dead, bringing it to the surface will cause the grass to grow and interfere with the wheat. In reference to obviating these objections, it has been suggested that some implement might be used for cultivating the ground, after it was once well plowed, which would properly prepare it for the reception of the seed, without again bringing the sod to the surface. An excellent farmer in Ohio, lately mentioned to us his intention of preparing a set of very small plows, to be set in a frame, and so regulated as to work the furrow just deep enough to answer the purposes of seeding, and not to disturb the old sod. Mr. Wiard's "plowing machine," or set of *gang plows*, described in the Nov. number of the Cultivator, is in some degree designed to answer this purpose.

Again, it has been suggested that sowing the ground designed for wheat, with some leguminous crop—as peas, beans, or vetches, which from the broadness of their leaves are known to draw most of their support from the air, and consequently do not much exhaust the soil—would secure the objects of clean tilth and friableness, equally as well as is done by the naked fallow, and give the crop as so much clear gain over that mode. In many situations, we have no doubt a crop of peas, or early beans, might be taken off sufficiently early for a crop of wheat, and it is well known that the effect of those crops is rather to ameliorate than impoverish the soil.

Where land is occupied by clover, and is clear of weeds, plowing has been sometimes deferred till the time of sowing the wheat—giving the benefit of the growth of clover, either for pasture, or to be plowed in, for nearly the whole season, and obviating the necessity of a summer fallow. On loamy soils, or those of not too heavy a nature, we think this course might be safely followed. Excellent crops of wheat have often been obtained by it. Of the many examples which might be given showing this fact, we select the following given on unquestionable authority. On the farm formerly occupied by Mr. Woodward, of Camillus, Onondaga Co., (N. Y.) a field of fifteen acres in clover, was turned over in the month of October and sown with wheat. This proved the best on the farm—averaging 35 bushels per acre. Another instance was on the farm of Mr. Dickenson, Onondaga Valley, where the wheat was sown on a clover sod after a single plowing, and the measured yield from one acre was fifty-two bushels and eight quarts; and on several other acres the yield would not have fallen much if any short of the measured one.

It must be obvious that there is an immense difference in the profits of cultivation where no interval is allowed in the rotation, and where the ground is every third or fourth year unoccupied by any crop: and, excepting under particular circumstances, such as have already been mentioned, we see no good reason for the summer fallow. But, as we have remarked, there are some cases where, from the foulness of the ground, &c., the fallow must be adopted. In conclusion, therefore, and in consideration of the whole matter, we cannot present a more comprehensive and correct view, than by adopting the language of the late Rev. W. L. Rham, in that sterling work, the Dictionary of the Farm:—"The advice we would impress on the minds of cultivators, is—Avoid fallows, if you can keep your land clean; but when you fallow, do it effectually. Do not spare either plows or harrows in dry weather."

"SWEET AND SOUR APPLE."

I have seen apples called half sweet and half sour, said to have been produced by innoculating or grafting together two half buds; but I became satisfied that *the variety was natural*, and not produced by such means. It appeared to me that the *ridges* either ripened before the *hollows*, and hence the former became sweeter than the latter,—or else there was a defect or disease in the former which rendered them insipid. Indeed there was a deadness of flavor which I have found in no other apple.

Now if two half buds can be made to grow and coalesce, it is very strange that such artists only select *sweet* and *sour* apples for a trial of their skill, when a difference of *color*, of *size*, and of *earliness*, would be so much more strking and extraordinary. For instance—why have they not exhibited an apple which shall be on one side the *little* early juneating, and on the other the *large* fall pippin? or the *yellow* harvest and the *red* spitzenburgh? or the *early* bough and the *late* Roxbury russet? If they would take such kinds as should be agreed on, and achieve what they pretend has been done, all difference of opinion might be terminated at once, and a great number of splendid apples *manufactured* profitable to both the nurseryman and the orchardist.

Its not having been done, however, when it was quite as easy to do, is rather a suspicious circumstance; and it is not less remarkable that the *color* on both sides of the fruit which I have seen, should differ so little; that both sides should be so nearly of a *size*; and that both sides should be so nearly *mature* at the same time, not like the disparity between summer and winter apples. Another reason for doubting the reality of such *manufacture* may be found in the loose and careless manner in which its advocates have expressed their opinions. If the half of two *blossom* buds indeed, could be made to grow together, we might have an apple half *sweet* and half *sour*, or half *red* and half *white*, from those two buds, but nothing further; for if the grafter should take the half of two *leaf* buds, the result would be very different. He would then have a stem consisting of two distinct kinds, soldered or cemented as it were together—but not mixed, and each kind occupying its own side of the tree. Hence each side would have its own kind of fruit, and there would be no partnership business between them. The idea that each limb would be composed of the two kinds, is altogether preposterous.

Such are my views of this matter. If I am wrong, however, I shall be willing to make proper acknowledgments whenever the advocates of such amalgamation shall exhibit the necessary proofs of their skill.

Cayuga co. 12 mo. 15, 1844. D. T.

Turnep cutting Machine.—A man by the name of Saul, in England, has invented a turnep cutting machine, which may be manufactured by the farmer's own workmen, at a cost of from not more than $2 to $4, that will cut turneps from two to three bushels per minute, any size that may be required.

IRRIGATION.

The benefits of thorough draining are becoming well understood by good farmers; but the mode of improving crops by irrigation, or watering soils by artificial channels, remains as yet almost unknown among them. With the hope of throwing some light and awakening some interest, we offer a few remarks on the subject.

The chief advantages of irrigation are of course to be looked for on grass lands. Every farmer must have noticed the greatly increased product of meadows where streams have passed across them. This may be in some degree owing to the greater richness of the soil in those low places, but it is by no means the chief reason. The few experiments which have been made, most conclusively show that dry upland, when watered by such streams as may be thrown upon it, and the soil enriched by such matters as they deposit, is improved in fertility to a very high degree. A few instances of such beneficial results may be mentioned.

S. Williams of Waterloo, N. Y., states that in the year 1840, during a season of severe drouth, he admitted water in small gutters between the hills and rows of vegetables in his garden. "In ten days, early potatoes grew two-thirds in size." In fact, he had never obtained a good crop of potatoes before. Other vegetables were greatly benefited.

E. Wilbur, now a resident of Macedon, N. Y., tried an experiment many years ago in Yates county, as follows: A field of seven acres lay on each side of a small valley through which a stream passed. This field was so unproductive, that to use the owner's own expression, "it was as dry and barren almost as a road." It was plowed and seeded. Channels were plowed from the stream, to carry the water on either side to the dry portions of the field. Successive furrows below, spread the water evenly over the surface as it escaped from the sides of the upper to the next below. Channels were also made from the side ditches of a road which crossed this valley, to carry the wash from them to the meadow. About a day's work was needed for the whole. And what was the result? "The effect was such," said he, "that it paid me a hundred fold for the seven acres after the first year. It produced for several years while I owned it, from two and a half to three tons of hay to the acre; and the man I sold it to, told me last year that he hardly ever saw such grass—there was hardly room on the ground to make the hay after it was mowed."*

E. D. Andrews, of Pittsford, N. Y., states, "In the hilly country of Vermont, I owned a farm, over which I carried the water of a small stream, in artificial channels, more than a mile. Lands that did not yield half a ton to the acre, were thus made at once to yield two tons; by which means I added to my crop six or eight tons. A little experience taught me I could carry water where I had not the least suspicion it could be carried. Every stream that runs with any rapidity, may be used for this purpose."*

Some farmers in the vicinity of Philadelphia, have long been in the practice of irrigation, by selecting permanent meadows on the sloping lands on each side of a stream, from which the water is diverted by channels, carrying it as high up the sides of the valley as the head of water will admit. Two tons and a half of hay are a common crop on such meadows.

In the southern portions of England, where irrigation is extensively and very successfully practiced, and in a much moister climate than our own, the chief benefits of the operation appear to be the deposition of fertilizing matters held in solution or suspension by the water. Some striking illustrations of this fact are given. A gentleman who owns meadows on the banks of the stream which passes through Winchester, has observed the great superiority of the waters below the city which have received the drainage of the sewers; and has also found that waters once used for irrigation, have their value greatly reduced by the deposit of the materials they contain. On one occasion, having long enjoyed the exclusive use of a stream, his neighbor, higher up, imitated his example, and the water became so deteriorated, that he thought of disputing the right with him. But the most extraordinary instance of the excellence of this mode of manuring, is furnished by the meadows of the Earl of Moray and others near Edinburgh. The spring water, which supplies that city, before it flows off, becomes saturated with all the enriching matters which the city affords. Such are the wonderful effects which after many years, these waters have had upon the meadows, that the grass which is cut and given green to cows, is mowed sometimes six times a year; it is sold by the quarter acre and upwards, and generally brings from £24 to £30 per acre per annum, or from $120 to $150. A part of the Earl of Moray's meadow brought £57 per acre, or about $280.†

It is true that such are rare instances, and that the command of such water is not very often obtained. But nearly all water of running streams contains fertilizing manures. Several analyses have shown that most of them contain considerable portions of carbonate of lime and gypsum; *hard* waters especially, containing the latter. Supposing then, as is often the case, that one part of gypsum is contained in every two thousand parts of river water, and that every square yard of dry meadow soil absorbs only eight gallons of water, (many soils absorb more) then more than a hundred weight and a half of gypsum per acre is diffused through the soil by the water.‡ The same reasoning is equally applicable to several other enriching materials.

Equal success has not always attended irrigation; some waters are doubtless much preferable to others; and on the other hand, some soils are vastly more benefited than others by the same stream, from a difference of composition. It has been found in some cases, that even heavy deposits from turbid streams have been of less utility, than the application of clear water in other cases, when that deposit consisted merely of sand and clay without a mixture of animal and vegetable substances and salts, and when, too, such clear water contained the latter substances in solution. But such, are rather exceptions to the general rule.

Heavy clays are generally least benefited, and sand and porous gravels most benefited by irrigation. On the latter, the water finds freer passage through the soil in depositing its impurities.

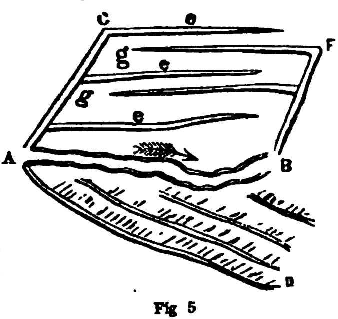


Fig 5

Two modes of watering the surface of lands are adopted, one for flat & nearly level land, and the other for land possessing considerable slope or steep acclivities. The annexed figure, (fig. 5) represents both these modes, where A B is the stream, and the side C is supposed to be a very gentle slope, and the side D much steeper. A dam is made at A, and the water carried by a main conductor to C, and from which it is distributed over the surface descending from it, by the feeders *e. e. e.* But it is important that the water should not collect nor become stagnant on any part; hence the main drain F is made on the lower side of the field, and from it lesser drains *g. g.* pass upwards between the feeders, and carry off the surplus water. But where the slope is more steep, as on the side D, feeders are made as represented in the figure, the water escaping from the upper one to each successive feeder below, as indicated by the dotted lines. Small pieces of boards placed in the lower sides of these feeders with holes bored through to admit the escape of the water, is the most perfect way of distributing it over the surface.

It is obvious that irrigation is chiefly useful on permanent pastures and meadows; but it may sometimes be employed on lands subjected to regular rotation, which he in grass a short term of years. This is best effected by plowing the land in such a manner that the feeders may be made upon the ridges at the center of each "land," the dead furrows forming the drains for carrying off the surplus water. A section of this method is shown in fig. 6, F. F. being the feeders, and D. D. the drains.

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* Genesee Farmer, vols. 2 and 6.

† C. W. Johnson.—‡ Ib.

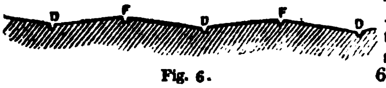


Fig. 6.

Laying out the ground, before striking the furrows, by means of a level, will greatly facilitate the work, and render it much more accurate and perfect. One of the most convenient instruments for this purpose, is the triangular level, represented by fig. 7. It is so made that the plumb line intersects the middle of the cross bar, when the extremities of the legs are precisely on a level. It is used in the following manner:—One foot of the instrument is placed at the level of the water to be drawn off, and the other at such a spot that the plumb will hang exactly at the middle of the cross bar; then bring round the other leg again to a level point as before. and so proceed to mark off the direction of the channel across the field. But it is necessary that the channel should have some descent; this is easily given, by suffering the plum to fall a little from the center towards the intended fall. If this distance from the center be half an inch, the descent from one leg to the other will be about one inch. This level should be made of light but stiff spars, and with ten or twelve feet span; and the exact course of the intended feeder or drain may be conspicuously indicated by a peg driven into the ground at each point marked by the foot of the level. The *general* slope of the land may be previously determined by the two *sights* at the extremeties of the cross bar.

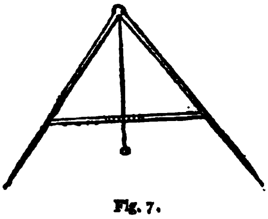


Fig. 7.

An objection has been brought to the practice of watering meadows, that the grass though greatly increased in quantity is much inferior in quality. This is indeed the case, but not more so than results from increased growth by the use of stable manure. The slight inferiority in this respect has been found by careful and accurate experiments to be vastly overbalanced by the increase of bulk.

Judgment must be exercised in not overdoing the business by suffering the water to remain on too long. Two or three weeks, with a short intermission, are admissible in dry seasons, or in autumn; but in spring, when the growth of the grass is rapid, much less time is sufficient. The appearance of scum upon the grass is regarded as an indication for the immediate withdrawal of the water. Autumn floodings are considered as the most permanently beneficial, as the waters are then charged with the animal and vegetable matters which have accumulated during summer. This season of the year will also be generally found most convenient for laying out and plowing the furrows for the channels.

When it is remembered that manure is spread in this way without the labor of drawing and shoveling—that the practice would probably be even more beneficial in our hot and dry summers, than in the moist climate of England—that it is in fact, not the transferring merely of manure from one spot to another, but the actual recovery of an immense amount of enriching material now swept through rivers to the sea,—the importance of a greater attention to the subject must force itself at once upon the mind.

Calculating the velocity of water in channels.—It often becomes a matter of some consequence, not only in cutting channels for irrigation, but for surface drains in reclaiming wet lands, to know the exact amount of water which may be carried with a given descent in the stream. To enable any person to calculate this readily, the following rule is given, and may be readily used by any boy who understands common arithmetic.

To ascertain the mean velocity of water in a canal or river flowing through a straight channel of equal size throughout:

Let f = the fall in one English mile in inches:

Let d = the hydraulic mean depth;

Let v = the velocity in inches per second, then

$v = 1.23\sqrt{d f}$.

The hydraulic mean depth is a quantity, which when multiplied by the perimeter of the channel in contact with the water, gives an area equal to the area of the section.

Example: Suppose a furrow is cut 6 inches wide and 4 inches deep, with perpendicular sides, and that it descends one inch in a rod; to find the quantity of water that will flow in it. It will fall 320 inches in a mile; the perimeter in contact with the water will be, 6 inches on the bottom and four inches at each side = 14 inches; the area of the section will be 6 times 4 = 24,—which divided by 14, the perimeter, gives 1.7 = the hydraulic mean depth. Then by applying the above rule,

$v = 1.23\sqrt{320 \times 1.7} = 1.23 \times 7.4 = 9.1$ inches, the velocity per second, or about one gall. per second, or one hogshead per minute.

In practice, considerable allowance must be made for rough and uneven sides and bottom, which would tend to retard the current. In larger channels, the calculation would be more accurate.

FARMING IN MASSACHUSETTS.

The farm of Cheever Newhall, Esq., in Dorchester, six miles from Boston, furnishes one of the best examples of productive husbandry, we have any where met with. It consists of sixty acres, a few of which are still in wood. Several acres are taken up by the grounds about the house, in garden, shrubbery, &c., and there are eight or ten acres in orcharding; yet the farm supports twenty-five cows, one bull, four oxen, and three horses. All this stock is supported entirely from the farm, with the exception of a few oats occasionally for the carriage-horses, and some wheat bran for the cows.

The soil was originally very strong and some of it wet.

Soiling.—Mr. Newhall keeps his stock altogether on the soiling system. They are fed mostly in the barn, at all seasons of the year. The cows are turned out for a few hours in each day, when the weather will admit of it, and are driven for exercise to a small, shaded enclosure, about a quarter of a mile from the barn. They are perfectly healthy, and Mr. N. thinks give quite as much, if not more, milk, in the course of the year, as they would do if grazed in summer in the ordinary way. The cows average 420 gallons per year, and the milk is sold at the farm at an average of about fourteen cents per gallon.

The principal articles for feeding, in the summer season, are rye and Indian corn, cut green. The former is sown in the fall, and is the first thing that is fit to cut in the spring. It may be commenced on as soon as it is high enough to mow, and will continue to grow till the usual time that rye matures, by which time, the corn, which is most relied on, is fit to use. Corn is the most productive of fodder of any crop which can be grown. The past season, Mr. N. kept *twenty-three* cows for *eight weeks*, wholly from *two acres and a half* of corn. He is confident that *one acre* of rich land is more than sufficient to keep a cow the year round—that is, it will afford sufficient green food in summer, and leave enough to be dried to keep the cow through the winter. In 1843, Mr. Newhall measured a square rod, being part of a lot of corn sown for fall and winter use, and carefully weighed the produce, which he found to be at the rate of more than *thirty-two tons* per acre. It was then carefully dried when it weighed 160 lbs. to the rod, or nearly *thirteen tons* to the acre. He prefers planting in the drill mode, three feet apart, and uses two to three bushels of seed (of the southern corn) per acre. Large quantities of carrots, potatoes, and beets are grown for winter feeding. The white carrot is the kind most cultivated—it is easier raised than other sorts, and generally yields better—giving from 800 to 1000 bushels per acre. Each cow is fed during winter, with from a peck to a half-bushel of roots per day, with a little wheat bran, in addition to their dry fodder.

Making Manure.—Much attention is given to this branch of farming operations. The manure from the cattle and horses is pushed through scuttles into the cellar under the barn, and a layer of peat muck thrown over it three or four times a week. The barn-yard is so formed that none of the manure is wasted. Much manure is also made from hogs, eighteen or twenty of which are kept principally for this purpose. They are fed with the waste of public houses, &c., brought from Boston—on which food they get very fat. The pork covers all the expense of keeping, leaving the manure clear gain. The hogs are kept with a full supply of marsh mud, peat, &c., which being rooted over and mixed with their excrements, becomes good manure. The pens are mostly under roofing. We noticed a contrivance about the sties which we do not remember to have seen before, except on the farm of J. W. Haines, in Hallowell, Maine. The sty consists of an upper and a lower story, and the hogs resort to either as they find most conducive to their comfort and convenience, by means of an *inclined plane*, across which cleats are fastened to answer the purpose of steps and to keep the hogs from slipping down. The upper story, which is always dry, is generally used by the hogs for a *bed-chamber*—their work is done below, and in very hot weather, they go there to cool their bodies in the moist earth.

Besides availing himself of all the means of making manure from his stock, Mr. Newhall has another manufactory which is of great importance. From some large vats which have been provided at several of the large hotels in Boston, he obtains annually about sixty hogsheads of urine. The mode of using this, is to make it into compost with peat-muck. The muck is kept in the barn cellar, and the vehicle in which the urine is brought is driven into the barn, and the liquid is conducted by means of pipes to the muck below. Each hogshead of urine is sufficient to saturate a cord of muck, which is thus made—as experience has amply proved—of more value than the same quantity of any other manure used on the farm.

Buildings.—All the buildings are convenient and well and substantially made. The barn, (of which we hope to give a cut hereafter,) is one of the best we have seen. It is 120 feet long and 40 feet wide. The floor runs through the whole length, leaving the bay on one side and the stalls for cattle and horses on the other. The cattle stand on a platform raised a few inches from the floor, and slightly sloping backwards, and of such a length that the manure drops off behind it; by which means the cattle are kept clean and dry. Between the manger from which the cattle eat, and the platform on which they stand, is the watering-trough, which runs through all the stalls. Here the stock, whenever it is desired, are watered from a pump which is placed at one end of the barn. We omitted to mention, in our notice of Mr. French's farm last month, that his cattle are also watered in the same manner.

There is a deep cellar under the whole barn, a portion of which serves for the safe-keeping and manufacture of manure as already described, and the remainder as a store-house for vegetables. The space assigned for vegetables is divided into stalls or bins, arranged along one side of an alley, for the convenience of taking out the roots. There are scuttles in the barn floor, through which the vegetables are dropped directly from carts into the bins. The barn doors are made to slide on iron rails, instead of being hung on hinges. This is a plan which has prevailed considerably in Massachusetts for a few years past, and we think preferable to any we have seen. The door rests on cast-iron wheels, which run on the rail. The rails are cast with a small ridge in the centre, and the wheels with a corresponding groove. Thus the door keeps its exact place without any trouble, and runs very easily.

Fences.—From the system pursued with his stock, (soiling) Mr. Newhall has need of but few interior fences. Those required are heavy walls—the stones for which are found on the farm, and they were formerly in so great abundance that it was necessary to dig them out before the land could be tilled.

Sowing Grass-seed.—Mr. Newhall decidedly prefers the fall for sowing grass-seed. He thinks August too early for sowing on his farm, as there is sometimes a drouth after this time in the year which kills the young grass. He has been very successful in late sowing. He showed us a beautiful piece of sward which was sowed down on the seventh of October, 1843; and the past year he has sown still later. We think so late sowing succeeds better on his gravelly soil, than it would do on clay land, or that which is more liable to be thrown by frost.

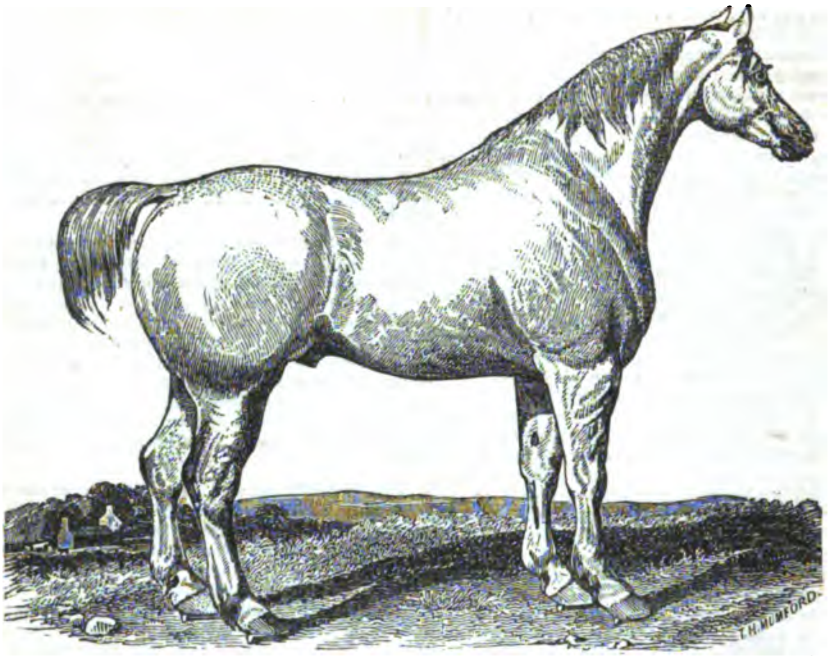
Fruit-trees.—Fruit, particularly apples and pears, is a considerable object on this farm. Besides having an abundance for home-consumption, three hundred dollars worth were sold the past year, among which were eight barrels of Bartlett pears, which brought fifty dollars. Mr. Newhall has a large collection of cherries, plums, grapes, and the smaller fruits. He showed us some of the finest Isabella and Catawba grapes we have met with in this latitude. Several of his pears are also very fine. We were shown specimens of Beurré Diel, Seckel, St. Germain, Napoleon, &c., which were excellent.

Mr. Newhall showed us a lot of pear trees imported from France and Germany, grafted on quince stocks, and cultivated at the distance of only four by five feet apart. The trees are kept trimmed in the shape of a distaff—what is called in France the *Quenouille* form—a mode which we are told succeeds well with these dwarf stocks. The trees are brought very early to bearing, and it is said as much, and as good fruit is obtained in this way for a given extent of land, as by standard planting: though none of the dwarf trees are as long lived as those grafted in their own species and cultivated in the usual manner.

Remarks.—Comment on the above facts seems scarcely necessary, yet we cannot omit to call attention to the great amount of products which Mr. Newhall obtains compared with many farms containing hundreds of acres each. Here is a farm of only sixty acres, which, besides affording three hundred dollars worth of fruit annually, and leaving a large portion of it for merely *ornamental* grounds, supports more stock than most farms of twice or thrice its extent. A striking example is here furnished of the fallacy of the idea that agriculture cannot be prosecuted to any extent or advantage without a *large farm*.

SUBSOIL PLOWING.

Col. **Sherwood**, of Auburn, made use of the subsoil plow the past season on fifteen acres. A part of the subsoiled land was planted to corn, and a part sown with wheat in the fall. The soil was loamy, and the subsoil hard clay and gravel. He used the subsoil plow of Ruggles, Nourse & Mason. It required four oxen to draw it, and to work to the best advantage at the depth it was run in this case, which was one foot, Col. Sherwood thinks there ought to be six oxen. The team worked over from an acre, to an acre and a quarter per day. The ground had not been plowed for thirty years. It was naturally wet, so much so that in a wet time, the water would stand on it to the injury of the grass. The effect of the subsoiling was to render the soil and subsoil so friable, that the water immediately found its way through, and though a portion of the past season was very wet, the water at no time remained on or so near the surface as to do the least damage to the crop. That part which was put to corn, was first planted on the 20th of May, but the seed failed, and it was planted again on the last day of May and first day of June, and grew so vigorously that it got ripe as soon as other corn in the neighborhood. Several strips of twenty to thirty feet wide were left through the field, *not* subsoiled. The difference in favor of the subsoiled portion, was very obvious in the ranker growth and larger size of the corn on that part—it was so plain that it might be seen to a row. The different portions were not measured separately at harvest time. The effect of subsoiling on the wheat crop, cannot be told at present.



THE CLYDESDALE HORSE.—(*Fig.* 8.)

AMONG the various descriptions of horses published in the Cultivator, I have no recollection of having noticed a description of the Clydesdale breed. The above portrait is copied from Mr. Stephen's "Book of the Farm."

In the Complete Grazier they are described as being "strong, active, hardy animals, of the middle size, remarkably steady, true pullers, of sound constitution, and well adapted to all the purposes of husbandry. They are, therefore, deservedly in esteem among the northern farmers, particularly on heavy soils; they are not, however, so active, nor, consequently, so well adapted for light land, as the Cleavelands; neither are they so handsome. They are said to have been descended from a cross, made by one of the Dukes of Hamilton, between some Flemish stallions, imported many years ago, with the Lanarkshire mares, and they derive their appellation from the district on the Clyde where they are chiefly found. They have already made their way into the bordering counties of England, and there can be little doubt that, as their good qualities become more appreciated, they will yet travel still further south."

This valuable breed of horses, is described by Mr. Aiton as "rising from 14 to 16 hands in height: if beyond that, they are generally unshapely mongrels, and greatly deficient in spirit; the effects of crossing small jaded mares with overgrown stallions. They are sound, fleshy, well-proportioned, strong, and heavy, without being too coarse or clumsy. The head is in due proportion to the body; rather small than large, and not so full and prominent below the eyes as some of the English breeds: the nostrils are wide, the eyes full and animated, and the ears erect. The neck is neither long nor slender, but strong, thick and fleshy, with a good curvature, and the mane strong and bushy. They are broad in the breast and thick in the shoulders, the blades being nearly as high as the chine, and not so much stretched backward as those of road horses. The arm tapers to the knee: the leg rather short, bone oval and strong, but solid and clean. The hoof round, of a black color, tough and firm, with the heels wide, and no long hair on the legs except a tuft at the fetlocks. The body round and heavy; the belly of a proportional size, neither small nor large, and the flank full. The back straight and broad, but not too long; the loin broad and raised a little; hucks visible but not prominent, and but a short space between them and the ribs. The sides from the shoulders to the hips, nearly straight. The thighs thick and meeting each other so close under the fundament, as to leave only a small groove for the tail to rest on. The tail strong, heavy to lift, and well haired." "The most common colors of the Clydesdale horse are black, or, more frequently, grey."

This description combines most of the best points peculiar to a perfect draught horse for the cart or plow; but it must be apparent that they are not often found united in one animal. C. N. BEMENT.

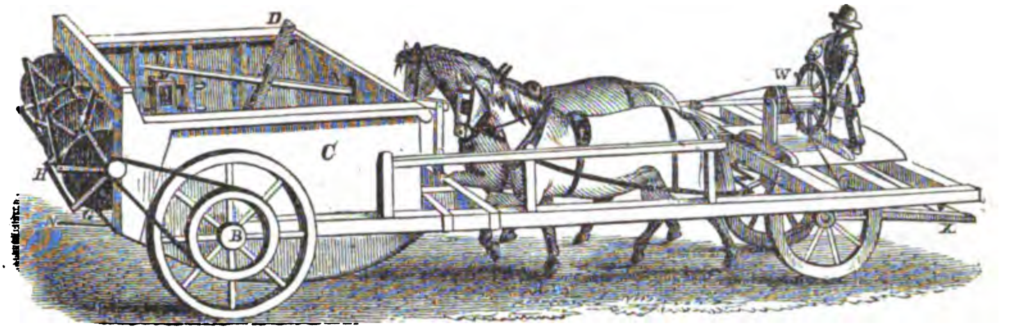
Albany, Dec. 5, 1844.

NEW PUBLICATIONS.

AGRICULTURAL BOOK FOR SCHOOLS.—We see it stated in our foreign papers, that "*A Catechism of Agricultural Chemistry and Geology*," drawn up by Prof. JOHNSTON, at the request of the schoolmasters of Ayrshire, has already passed through ten or twelve editions in Great Britain. From the high terms in which we have seen it alluded to, as well as from the practical and common sense views which the author takes of the connection of these sciences with the practice of agriculture in his lectures, we are rejoiced to learn that he has prepared an edition of his Catechism for publication in this country, by making such alterations as were deemed necessary to adapt it to the use of our schools, and that it is soon to be published, with an Introduction and Notes, by our correspondent, Mr. J. P. NORTON, who, it will be remembered, is now pursuing his investigations in agricultural chemistry, with Prof. Johnston.

THE HERD BOOK.—The 5th vol. of this work, consisting of two parts of 620 pages each, has been recently issued in England, and we have been favored by GEO. VAIL, Esq. of Troy, with a copy of it. It is devoted exclusively to Cows and their progeny, and contains the pedigrees of a large number of animals owned and bred in this country. We are not aware that any copies of it are for sale in this country.

"OHIO CULTIVATOR."—Mr. BATEHAM, whose retirement from the New Genesee Farmer, we noticed in our last, has removed to Columbus, Ohio, from whence he has sent us his prospectus for "The Ohio Cultivator," the publication of which he proposes to commence in that city on the first of this month. It will be published semi-monthly, 8 pages quarto, at $1.00 a year. Success to him.



ESTERLY'S PATENT HARVESTING MACHINE—(Fig. 9.)

THIS machine is calculated for cutting the heads from standing grain, leaving the straw behind. Where grain stands up well, it is warranted to cut the heads from 25 acres of wheat per day—the power employed being three horses, requiring two men and a boy to manage the machine. It is claimed that from one to three bushels more grain is saved per acre by the use of this machine, than is saved in the usual way. As the heads of the grain are cut off, they are received into a large box, or "receiver," and when that is filled, the heads may be conveyed to the barn, or secured in cribs—the latter being considered preferable, as they afford the grain a better chance to dry. From half an acre to an acre of wheat (according to the condition of the crop,) may be cut at a time, without unloading the "receiver." The operation of threshing is much facilitated by this mode of cutting grain—making a saving in this respect of from fifty to seventy-five per cent. It is confidently believed that this machine is destined to effect a great improvement in the saving of labor and expense in harvesting grain, and preparing it for market. By the use of it, the farmer is enabled to cut and secure, at the proper time and in good order, his wheat crop, with only the ordinary number of hands employed on his farm, besides abolishing the severe labor and drudgery of harvesting in the usual mode. The machine is manufactured by the patentee, GEORGE ESTERLY, Heart-Prairie, Wisconsin, and will shortly be for sale at Chicago, and other central points in the western country.

PRACTICAL HUSBANDRY.

Improvement of Worn Out and naturally Poor Lands, Old Fields, &c., in the Middle States.

I intimated in a late paper in the Cultivator, (vol. 1, p. 344,) that I would shortly give the readers of that excellent work an answer to the question HOW the improvement of the kinds of land mentioned in the heading of this article, could be accomplished in the cheapest way. I now proceed to the fulfilment of my promise. Land is poor or rich from various causes. It may be poor naturally, from being deprived of the accumulation of decomposed organized matter, by the washings of rain, the overflowing of streams, &c., and by its own gravelly and porous nature, admitting the upward filtering of spring water, as is the case in low gravelly bottoms. It may also be poor from the too large a portion of iron in its composition. But the most universal cause of poverty of soil, is EXHAUSTION, from over-cropping, taking away always, and returning nothing; as was so generally the practice in old times, and is too much the practice now in all the middle States. In a former paper I have expressed the opinion that a man may purchase and improve a piece of this poor or worn out land cheaper than will be the cost of removal to, and purchase of a piece of land in the west, especially when the sacrifices incident to such removal are taken into the account. I most sincerely believe in the truth of this proposition. But let us proceed to the subject—the HOW, not the *why*, this land should be improved.

The first object to be attended to in the improvement of land, is the grubbing up and clearing off every tree and shrub that is not wanted. Let this be done at the beginning. Allow no clumps or clusters of bushes or briars, or single ones either, to remain in the field. The next thing is ditching and draining of all sunken and boggy places, if such exist. Very often the simple plow furrow will answer, but sometimes a deep ditch must be dug. If it be deep enough, a blind ditch should always be preferred, so that you may cultivate the land over the ditch, and also save your land the inconvenience of open ditches. Having grubbed and ditched, and thus drained the land, the next object is to ascertain the quality of the soil, all parts of it. You may find that the low places you have drained are composed of hard clay. Some of the upper or higher places may be too sandy. You will in such case, employ your carts in carrying clay to the sandy parts, and return with sand to the clayey parts; and be very liberal in your exchanges, too. You may spread the clay at once, or allow it to remain a winter in cart load heaps, and spread it in the spring. The sand may be spread, of course, at once. All this is merely getting the land ready. A carpenter builds his shop, and "gets out" his stuff, before he thinks of "going to work" at his trade. So does every other artisan or mechanic. Why should a farmer not, also, before he goes to work to make money and a living, first "get his shop in order?" Having properly grubbed, drained, and mixed the soil, the next thing to be done is to ascertain the quality of the whole. It most probably wants lime to make it complete. Take a handful here and there from the whole field, say twenty handsful in all; mix them well together; then take a handful from the whole mixture, put it upon a shovel and heat it red hot; then take it from the fire and let it cool; when cold, pulverize it into a fine powder, and pour upon it good cider vinegar; diluted muriatic acid is best, but vinegar, if good, will do; if it foams considerably, you want no lime in the soil; if it do not foam, you must then apply lime. Nearly all the land in the middle States wants lime, and is benefited by its application. If it wants no lime, then go to work as follows: plow in the fall with the deepest working plow you can afford. In the spring, sow corn broadcast; and as soon as it is as high as you can well turn under with a good plow and two or three horse team, turn it under well, and immediately sow corn again broadcast; as soon as that is high enough to turn under, turn that also with a deep working plow. Generally you may turn under three crops in the same season. In the fall plow deeply in turning the last crop of corn under, harrow and seed with wheat. However poor your land may have been, you may be sure of a good crop of wheat the ensuing harvest. In sowing the corn, about three to four bushels should be sown to the acre, each crop.

If by the trial above described, you find your land requires lime, then, before the first plowing, apply twenty bushels of slaked lime to the acre, broadcast, then plow as before directed, sow the corn, and proceed as before, taking care to sow twenty bushels of lime before turning under each crop of corn; sow the lime on the corn as it stands, and turn corn and lime all in together. In this way, a first rate soil may be made out of the poorest old field in Maryland or any where else; and it will be observed that the only cost is in the liming and value of the seed corn, except the labor. Those who cannot afford to expend so much labor and money the first season, can extend the time over several seasons, applying say twenty or thirty bushels of lime to the acre, and turning under but one crop of corn each year.

The above may be considered a brief summary of the whole argument; and, it seems to me, scarcely requires elucidation. Some may however require explanations, and I therefore proceed to give them.

A clay soil requires only sand to make it a good one, so far as constitution is concerned; a sandy soil requires clay to make *it* good. These two elements of a good soil generally exist on all farms; and wherever they do exist in separate places, they should be combined and mixed, that the whole may be made fertile. If your land be too clayey, and you have no sand on *your* farm, probably some neighbor would be glad to exchange some of his sand for some of your clay, doing half the hauling, and thus both farms will be benefited at half the labor each. Rely upon it, there is more to be obtained in the improvement of land by a judicious admixture of soils, than is generally supposed. Manuring cannot supply its place, however large the quantity applied; and when once made, the effect is permanent, the benefit perpetual, the improvement lasts *forever.*

Low wet places are not only unproductive, but they are unhealthy, unseemly, and an absolute loss of all the land so situated. If your farm consists of one hundred acres, and twenty acres of it is of this low and wet kind, you have but eighty acres of land. Therefore drain, by ditching this low land, make it productive, by adding sand, &c., where necessary, and you will in effect have added twenty acres to your farm. And in draining, take care to avail yourself of the advantages of blind ditches. I do not suppose it necessary to tell you how to make them—the way may be found in almost all agricultural works, and they are very simple. A summary of the different plans may be stated as follows. Dig the trench as in the usual way of making an open ditch, of the proper depth and capacity, to carry off the water. Then lay in the bottom of the ditch, stones loosely packed, so that water will freely pass between them, about a foot deep. Then lay upon these loose stones, larger and flat ones, to keep the earth from filling the interstices, and then return the earth thrown out, leveling the whole surface. Some, instead of stone, lay in the bottom of the ditch, branches and limbs of trees and shrubs, and cover these with earth; but such blind ditches are obviously subject to obstruction from the decay of the wood, and thence from the caving in of the superincumbent earth. Others, in Europe especially, use an arching of *tiles* in the ditch instead of stones or brushwood; but this is too expensive for this country as yet. Where stones can be had, a good blind ditch may be made permanently effective by their use; next to stone, brushwood is to be preferred.

It surely cannot be necessary to say a word in illustration of the grubbing up of all useless growths of bushes, trees, &c. Never allow your fences to be sheltered by bushes or trees of any kind; they rot the timber, and you lose all the land they occupy. "Head lands," as they are called, are just so much deducted from your measure of acres. Clear out all such. If you have no other *clean* place in your field, let the head lands and fence corners be clean.

In ascertaining the precise quality of the soil, you accomplish precisely what every other artisan does when he ascertains his ability to do a certain job. You find out what the materials you are to work upon are capable of producing. If in that examination, you find your materials deficient in any one necessary ingredient—lime, for example—you, as other artisans would necessarily and instinctively do, apply lime. If you find it deficient in vegetable fibre, &c., you apply that substance, and if you find it deficient in clay or sand, as either of these preponderate, you apply the one or the other, as the result of the examination shall indicate.

Having prepared the soil for the reception of manure, the cheapest and most efficient method and material for supplying nutritious principles to the soil, is the next matter for consideration. I believe that corn sown broadcast, as above directed, is the cheapest, most efficient and speediest fertilizer. Some, and very many, suppose that the old plan of clover laying is the best and cheapest. I differ with them. You can only turn under a crop of clover once in two years; you can by an effort turn under three crops of corn in one year; and I believe that each crop of corn will carry as much nutritious matter into the soil as each crop of clover can do.

Now in this system of improvement, you have only to purchase the lime, if that be necessary; you can raise the seed corn on some part of the farm. All the rest of the improvement is derived from labor.

Never undertake the improvement of more land than you are certain you can manage. If you expend your funds upon too large a surface, you will be likely to lose the whole advantage of them. Calculate how much land you can work *well*, and confine yourself to that and no more. And in all your operations in agriculture, take care not to undertake too much. Suppose you can only work ten acres well in one year, if you undertake twenty acres, some of it will have injustice done it, and the result is obvious.

Deep plowing is one of the most efficient agents in the improvement of soils, as it is in the continuation of good soils. Never omit it. It may pay you scantily for a year or two; but it will ultimately repay you an hundred fold. Without it there cannot be any continued successful farming, no matter what the original soil may have been. Discard all shallow working plows from your farm, except the mere seed and cultivator plows.

Some lands will be benefited by 50 bushels of lime to the acre, and by it be rendered sufficiently calcareous; others may require 100 bushels; all this is to be found out only by proper experiments, as above indicated. If the solution of the soil foams freely in the vinegar or muriatic acid, it wants no lime; if but partially, it wants probably 50 bushels to the acre; if not at all, it may require an hundred bushels. If it be a red clayey soil, it wants more lime than if it be white or blue or yellow.

If you have no lime, and wood ashes are at hand, you may accomplish all the objects you aim at by their application. As ashes are mostly composed of different kinds of lime, besides their more soluble potash, from 50 to 100 bushels of ashes to the acre, applied in the same manner as directed for lime, will have the same effect as lime, besides giving you the advantage of the potash, the first year.

Where neither lime nor ashes are to be obtained, Plaster of Paris, as it is called, may be applied to most lands with advantage. The action of plaster continues to be a subject of dispute. My opinion is, that it simply serves the purpose of fixing the ammonia floating in the atmosphere, and that evolved from decaying animal matters, and thus securing it to the uses of the soil. No matter what its mode of action is, however, it certainly is a very efficient agent in soils generally, and in the absence of other still more effective agents, it should always be used, or at least tried.

I have said nothing of *fencing*, the most expensive item of farming, because it has nothing to do with the main object of this paper, and because the cheapest fence is that which each locality can afford with the greatest facility. One farmer can build a stone fence all around his farm, easier than he can a rail fence, simply because he has too many stones on his land, and in getting rid of them he hauls them to the line where he intends to make his fence, and in the seasons when he cannot be more profitably employed, he erects the wall. In the absence of stone, and where timber is plenty, the rail fence, the post and rail, &c., will of course be the cheapest fencing. I have no favorable opinion of hedges, except in the absolute absence of both stone and timber. They require a long time to grow; and in this country there is not a single kind of hedge plant that has succeeded satisfactorily. There are a few instances of good hedges being made, but I will venture to say there is not one in the United States that can be imitated profitably as to cost, time, and efficiency. If nothing but live fences had ever been in use, and some inventive genius had discovered the use of artificial fencing with rails and stone, he would have been considered the benefactor of his age. For myself, though I have traveled much, and have extended my observations over fifteen of the States of the Union, I have never seen a good efficient hedge occupying the place of ordinary farm fences. And yet the attention of farmers has been directed to it ever since the country was settled; the oldest American writers recommend them; seeds were imported to plant them a century ago; and all these efforts have been continued to the present day with increased force each year. And yet there is not, so far as I know, a single farm in the United States protected by hedges, in all its parts, or in any considerable portion of them. The economical farmer, therefore, will look to some other mode of fencing for protection; and, as said above, that which his land affords most plentifully and most easily of access, is the cheapest and best for him.

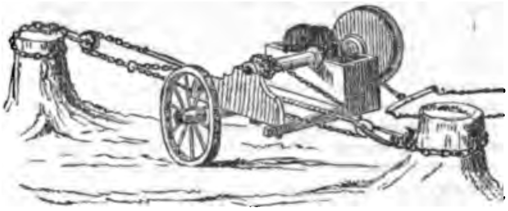
I must not omit a few words more upon *deep plowing*. I know it is the general opinion that we must not plow so deep as to turn up the "*hard pan*" of clay, or the white gravel, &c. &c. I am very certain this is a very great popular error. If we had a plow that would turn up the earth two feet deep, I do not care what the subsoil may be, in five years the *fertile soil* would be two feet deep. I admit, that generally a very stinted crop would be produced for the first two or three seasons; but I also assert, that the third or fourth and all subsequent seasons, will pay not only for all the deficiencies of the first two or three, but an hundred fold interest. Wherever a deep working plow has been used, the drouths of a dry season are not felt. The roots of plants pass deeply into the earth, and the burning suns and parching winds pass over them harmlessly. The subsoil plow is a good thing. It enables the farmer to avail himself of most of the advantages of deep plowing without any sacrifice of the first and second season's crop; but then it does not turn up this subsoil—it merely loosens it, enabling the roots to pass deeply. The roots, however, get no other advantage in this deep rooting, than that of protection from drouth; they get no nourishment in those depths. The protection from drouth, however, is an important consideration, and should always be availed of. But I would seek this advantage always when I could by the use of the deep plow, even at the sacrifice of a portion or even all the first two or three crops.

The saving of manure is the next, and though last here, not the least important matter for consideration. Every thing of a vegetable or animal kind, useless for other purposes, on a farm, should be gathered and saved for manure. A convenient compost yard and pit should be provided. The dung from the stables, the weeds from the fields, the chaff and offal straw, cornstalks, &c., the kitchen waters, *contents of chambers*, and all of such things, should be cast into the pit. The pit should be so situated that the drainings of urine, &c. from the stables should pass into it. A shed should be built over it to protect it from rains, and the effects of the sun's rays. Plaster of Paris should be sown over the surface of the manure pit once a week during warm weather, to catch and fix the volatile ammonia that will be continually passing off. If such a thing as a leisure day happen, (which, by the way, I do not see how a *good* farmer can ever have even a leisure moment,) the leaves from the woods may be profitably gathered and thrown into the pit. Twice a year, say in April and October, the contents of the pit should be taken out, thoroughly mixed and piled up to digest for a week or two or even a month. In forming the piles, if you have any swamp mud or bog earth, you may very properly add two or three loads of this to each load of the contents of the pit, taking care to mix them well. After the pile has stood a sufficient length of time, the compost may be carried out and spread over the land, either as a top dressing, or to be plowed in before seeding.

These are my views of the improvement of worn out and all other land. I submit them with great deference to the farmers of my country. Should they disagree with me in any or all particulars, I trust they will attribute my errors to at least good motives. I desire to do some good in my day, and the agricultural interest is, above all others, the most worthy of my efforts in my opinion. It certainly has my best affections and wishes.

GIDEON B. SMITH.

Baltimore, Nov., 1844.



HALL'S STUMP MACHINE—(Fig. 10.)

LUTHER TUCKER, Esq.—I have the pleasure of answering your inquiries in relation to Hall's Stump Machine, the model of which you have seen.

Mr. R. Hall's Stump Machine, to which the State Society recently awarded the premium and silver medal, has been used on my farm in pulling 400 or 500 pine stumps of the worst description, and I found its operation superior in all respects to any machine I have used or seen.

Mr. Hall has spent six years, and near ten thousand dollars, in bringing his machine to its present state of excellence; and certainly deserves great credit for his perseverance as well as ingenuity.

The machine requires three men and a boy, with a small horse, to work it to advantage. Its cost, with all the chains, levers, &c., is from $300 to $400.

Upon some of our best lands in the southern counties, the Stump Machine must precede all agricultural implements but the axe. The expense is considerable, being from 15 to 25 cents per stump, but the ground is thereby thoroughly cleaned to any depth. The stumps are either made into fence or burnt: the plow and harrow do their work; the seed is sown, and the effect is like magic; the unsightly stumps are gone, and the whole field is like a garden.

There are four or five different kinds of Stump Machines now in use in this county, and some of them work very well; but Hall's is the most powerful, most convenient in the application of power, and is least likely to get out of repair.

In conclusion, I ought to state that this machine is found of great service in moving buildings and sunken vessels, and in other similar operations; but it is especially *as an agricultural implement*, of great importance, that I desire to bring it to the notice of agriculturists through your excellent paper. Very respectfully,

Owego, N. Y., Oct. 19, 1844. GEO. J. PUMPELLY.

REMEDY FOR THE ROT IN THE POTATOE.

MR. EDITOR—I notice in the November number of the Cultivator, complaints made about the "rot" in potatoes. I was troubled with it for many years, and having found a remedy, give it for the benefit of your readers.

The rot in potatoes commenced in this section of the country about 10 years ago; one-third of a crop was frequently lost by it, and often in the spring, hundreds of bushels have been thrown from the cellar quite useless. For some years past, I have used slaked lime, which I sprinkle on the potatoes as soon as they are cut for seed, and shovel them over in it, and plant them immediately. Since I have adopted this plan, I have not lost a potatoe, either in the ground, or after they were put in the cellar; and such of my neighbors as follow my example, are alike fortunate, and in no way troubled with the rot.

When other potatoes were troubled with the rot—three varieties of mine were exempt from it, viz: the "Cups," "Black Apple," and "Red Apple" potatoes. I shall be glad if any of your correspondents can explain why they, with the same treatment, were not subject to the rot like other kinds.

I find it best to plant each kind of potatoes separate, otherwise if the seed is mixed, a few years will produce quite a different kind of potatoes.

I have often raised seed from the potatoe balls, adopting the mode recommended in the November number. The potatoe will obtain its growth in four years; but the second year, the best variety may be selected for yielding and for the table.

About seven years since, I raised from the ball an excellent kind of potatoe, resembling very much the "White blue nose," which I call "Howards;" they yield largely, and are of fine flavor, and preferred here to the "White blue nose."

If any of the above varieties of potatoes are wanted in your neighborhood, I can ship them to Boston, and if you will accept a barrel as sample, I will forward them as you may direct. Yours truly, Joseph Walton.

Saint Andrews, New Brunswick, Nov. 20, 1844.

Remarks.—We thank our respected correspondent for the above statement. The mode by which he has succeeded in preventing the rot in his potatoes, is certainly worthy of a trial by our farmers. The experiment will cost but a trifle, and can do no harm if it should fail of success on our soils. A barrel of samples of such varieties as Mr. W. may deem best, will be very acceptable. They may be shipped to Boston in the spring, to the care of A. D. Phelps, 124 Washington-st.

INDIAN CORN—NEW VARIETY—PLANTING.

I send you a few ears of a new variety of sweet corn, obtained by the process detailed below:

1st year. I had a very early yellow corn, but quite diminutive in its growth—the stalks not over 3 feet in height, and the ears not over 4 inches in length. Late in the season I planted this in a patch of sweet or shriveled corn, then considerably grown. As soon as the tops or blossoms of the yellow corn protruded, they were cut off, in order that the early corn might be impregnated only by the sweet corn. The result this year was yellow corn of the usual size and appearance.

2d year. The last year's product was planted by itself, at a distance from all other corn. The result was, a corn growing about five feet in height, having ears 7 to 8 inches in length, with a mixture of yellow and white smooth corn and sweet or shriveled corn on the same cob—fit to eat about the middle of July.

3d year. I separated the corn into two parts, the smooth by itself, and the shriveled by itself, and planted them apart, at a distance from other corn. The product this year corresponded mostly with the corn planted, only there was a slight mixture of the shriveled upon the smooth corn, and of the smooth upon the shriveled. The smooth was fit to eat about the middle of July, and the shriveled about a week later.

4th year. I again planted the smooth and the shriveled corn in separate patches. The smooth was fit to eat 18th of July, and the shriveled the 24th. The height of the stalks averaged about five feet. The character of the two kinds seemed now to be permanently established. The smooth corn produced its like, as did the shriveled. The latter has the disadvantage of being yellow, but is earlier than common sweet corn and equally palatable. The smooth corn has a mixture of white and yellow on the same cob.

5th year. I separated the white and yellow smooth corn, and planted them apart from each other. The result is two distinct varieties of smooth corn—the earliest fit for eating 19th of July. The white partakes very much of the tenderness of sweet corn. Some portion of it was about a week later than the rest and grew about a foot higher.

6th year. Having separated the earliest of the white corn from the latest, I planted them apart, and thus procured two distinct varieties of white smooth corn—one fit for boiling 18th July, the other about a week later. Upon the ears of the earliest variety of last year's growth, I noticed a few scattering kernels of white sweet corn. These were carefully picked out and planted this year by themselves. The result is *a white sweet corn fit for boiling 18th of July*, corresponding with the earliest smooth corn in size of stalk and ear.

My object in instituting this experiment having been to obtain a corn, suitable in color and early maturity for marketing, I discarded the yellow varieties, closing the experiment in possession—

1st. Of a white, smooth, eight rowed corn, with ears 7 to 8 inches long, approaching the common sweet corn in flavor, and fit for boiling 18th of July.

2d. Of a similar corn, but somewhat larger in stalk and ear, and a week later.

3d. Of an *eight-rowed sweet corn*, with ears 6 to 7 inches long, and fit for boiling 18th July, (in 1844, 14th.)

The last variety, proving to be the precise article that I was in pursuit of, I have for three years past kept for cultivation that alone. It is that which I send you.

A word upon the proper depth of planting Indian corn. A small patch of the early sweet corn above mentioned, was planted last spring *three inches* deep. It came up well and grew thriftily till it was 3 or 4 inches high, but then came to a stand. It remained without increasing its height perceptibly, a full fortnight, while another patch of the same kind of corn grew rapidly. On examining the roots of the non-growing corn, it was found that a joint had been formed about an inch and a half above the kernel, and that roots had sprouted out from the joint, *leaving all below to parish*. In other words, the plant had abandoned the lower roots at 3 inches depth, and formed a new set an inch and a half from the surface. While the process of changing the roots was going on, the plant seems to have ceased to grow above the ground. The effect was to retard the maturity of the corn about a fortnight; but I do not know that its size and productiveness were ultimately impaired.

The inference which I make is, that corn, *to be early*, should not be planted more than 1¼ inch deep.

Noyes Darling.

New-Haven, Ct., November 18, 1844.

AGRICULTURE AND RURAL ECONOMY OF THE SOUTH.

Ingleside, near Washington, Miss., Nov. 16, 1844.

To the Editor of the Cultivator:

Dear Sir—Press of business, alone, has prevented my carrying out my intention of addressing you, as I promised in my last, on various subjects of interest to us here; and in particular of replying to Mr. Camak's call for aid in introducing the olive to the south. He does me but justice in supposing that no effort on my part, within my power to make, would be wanting towards the introduction of any plant that would add to the wealth of my adopted country. Among others I have often thought and spoken of the olive; but felt so much discouraged by the fact that my father-in-law, Mr. Isaac Dunbar of this place, has repeatedly introduced varieties of that plant without success, the frost destroying them, that I entirely overlooked the extract in Kenrick's work. Since reading Mr. Camak's article, I am resolved to make an effort to procure the Nikita olive and give it a fair trial here. The difficulties, however, which a private individual has to contend with in such an effort, are very great. In my own case, the only course I can pursue, is to request my correspondents in Paris to make every exertion to procure some plants for me. If some few others would do the same, we might, some one of us, ultimately succeed. I have long ceased to expect that the General Government will give any such aid to the farming interest.

That every effort should be made by the south, to introduce other staple crops than cotton, is very certain. The over-production is so great that prices cannot improve; at present prices this troublesome crop cannot be grown with profit—in fact not without loss—and the only possible means of lessening this over-production, is to induce the cotton planter to turn his attention to and employ a portion of his force in other crops, or in auxiliary branches of economical husbandry, if even these pay no better than cotton does now. Here it is that a State Agricultural Society *and farm*, liberally supported by the state, would give proof of their value. Those experiments in the introduction of new staple crops could be tried there, which cannot well be done by individuals to any extent, with justice to themselves. Any planter can however, after a few years, carry on upon his plantation many practices of economical good management—to some of which I will presently advert.

I prepared a series of resolutions some weeks ago, which I intended submitting to our Ag. Society at its business meeting after our last Fair. But so great was the political excitement at this time, that I regret to say a sufficient number of the members did not attend on that day to form a quorum. As another business meeting will be held about the time your January number will have reached us, when I intend bringing the matter forward, I will give you these proposed resolutions here:

"Resolved, That it is the opinion of this society, that the present ruinously low price of cotton, arises almost wholly from inordinate over-production.

"That a committee be appointed to prepare an address to the farmers of the cotton-growing region; setting forth the absolute necessity that exists for an entire change in the system of farming pursued among us, so as to lessen the quantity of cotton produced—to employ a considerable proportion of the labor of our slaves in the production of other staples; and of all the supplies necessary for the plantation which can be so produced, if not with profit, at least without loss.

"That they shall include, in their address, all the information they can procure as to the staple crops which may be so introduced; with short notices of the system of culture necessary for each; cost of production compared with cotton, &c.

"That the use of cotton bagging, in baling, be particularly considered; information acquired as to the cost, in plantation labor, of its manufacture; strength requisite, &c.; and the particular grounds that may exist for objections, if any there be, to its use.

"That they also inquire, whether the establishment of cotton factories generally within the cotton growing states, would not have the effect of counteracting the combinations which are formed in the foreign markets to keep down the prices of the staple.—Whether, such a demand for provisions may not thus be created at home, as to render their production at least as profitable as that of cotton, and thus divert a considerable portion of the labor now employed in the over-production of the latter—And if, in the judgment of the committee, manufactories within the cotton region would produce these results, what measures can be best adopted to encourage their introduction.

"That they shall submit their address and report at the next regular meeting of this society."

In all enlightened governments, but our own, agriculture receives powerful aid and support; not so much by means of protective duties and imposts, as by the wise measures taken for its relief when in any manner oppressed. Witness, in Great Britain, the frequent appointments of committees of the House of Commons, to examine into the causes of results the most trivial when compared with that now in question, and with power to call before them for information, individual and documentary evidence from every part of the country. Although we in this country, have no such powerful aid given us, we might do much good by such a plan as this here proposed.

Some weeks ago, I had some inquiries made of me by a gentleman in Natchez, who informed me that he was one of a company formed with the view of shortly erecting an oil mill there; chiefly with a view to the making of castor oil. I assured him, at once, that the bean can be grown with profit by the planter; and promised to grow, next year, an acre or so, each, of the castor oil bean, sunflower, and Bené; also to try the Madia sativa, of which I have a small quantity of seed. I know that all these plants will do well here. In Illinois large quantities of the Palma Christi bean are grown, and the manufacture of castor oil is carried on with much profit. The farmers, there, so far as my recollection goes, found the bean a very remunerative crop. I neither remember the average yield per acre, nor the usual price, but have taken measures for refreshing my memory. Can you aid me? If you have files of the (Chicago) Union Ag. and Prairie Farmer, I think you will there find all the information wanted. It grows spontaneously along our road side, producing, I think, quite as good crops as those I have seen in Illinois. I have a variety of it in my garden of extraordinary and productive growth. A plant of it, which made its appearance in one of the borders, a volunteer, quite late in this present season, has attained a large growth. At five feet from the ground the stem is 15 inches in circumference; there it throws out three branches the tops of which are 17 feet from the ground, and spread to a diameter of 12 or 14 feet. Where the branches spring out, a spike of seeds has been ripe this three months; and now at the top of each of the three branches is a very heavily laden spike, the seeds in which are not quite ripe; though they certainly would have been had the seed been planted sufficiently early. The beans of this variety are very large. I find on trial that they weigh an average of six grains each. The stem and leaf-stems have a reddish tinge; the plant altogether forming quite a handsome tree. Last winter was so mild with us here that plants of this variety stood uninjured, and in the spring threw out multitudes of flower spikes. I am perfectly aware that a plant of such gigantic growth would be illy adapted to field culture, as a crop in rich land; I mention it merely as a proof that there is nothing uncongenial in our climate to the growth of the Palma Christi; and because I think that this sort would do well as an aftercrop, say on oat stubble; and would then have abundance of time to ripen its seed.

The Bené grows vigorously, and produces an abundance of seed; so, I am told, does the Madia sativa, although I have no knowledge of it myself; the sunflower I know will do well—all of these yield a very large proportion of valuable oil.

I have grown a small crop of Havanna tobacco this season, which is said to be of fine quality by those who profess to be judges. When properly cured and made into cigars a better opinion can be formed. I cut this three times, and each cutting was good; if planted early, and a handful of cotton seed or some other equally portable and effective manure hoed in round the plants at the second cutting, I have no doubt but four cuttings could be had each season—the two last of course of inferior tobacco.

The gentleman before spoken of, Mr. Isaac Dunbar, has for many years made his own wine. That which he exhibited at our last Fair was pronounced decidedly superior to any he has before shown. I think it was the best native wine I have ever met with. Mr. D. has a vineyard of sufficient extent to make a few barrels of wine, and leave enough of grapes to give even his negroes a fair share. His favorite grape is the Herbemont Madeira—as being perfectly hardy and requiring but little attention. At our summer Fair, this season, one gentleman exhibited seven varieties of grapes, principally European sorts. The variety that does best with us, is one known as the *Jack grape*. What it is I can only guess at. The vine is of a vigorous, healthy habit; young wood having a reddish tinge, resembling the cigar box and Norton's seedling: the bunches quite large and shouldered; the berries, which are entirely without pulp, are of sizes varying from that of an eighty-to-the-pound rifle bullet, to that of ordinary sized buckshot; juice a rich claret color and very abundant; the flavor fine, with a delicious admixture of sweet and sour; and forming altogether, when fully ripe, a most delicious table grape. If Mr. Camak will inform me by letter or otherwise, how to forward to him, I will have much pleasure in sending a couple of plants, that he may test this fine fruit in his region.

When I have again leisure, I may have somewhat to say on the cultivation of the vine, through yours or some other journal. I will only now add, that *excessive* deep planting will assuredly prove injurious. Moderately deep planting, however, *the soil being of a proportionate depth*, is by all means advisable. With you in the north, even as far south as Cincinnati and Nashville, and in the colder districts of Europe, the vine is trained low that it may benefit by the reflection of the sun's rays from the earth; while here, and even in latitudes north of us, to avoid this, and to secure the full benefit of the shade afforded by its own foliage, and all the air possible, the vine requires to be trained high—over a ten or twelve feet arbor, if possible.

I must pass over the subject of "new staple crops," on which a lengthy series of papers might be written. Indigo has been successfully and profitably grown here—the sole objection to it being the difficulty of making sale of the entire crop without having to seek for a mar ket. Madder, I am confident, would find its most congenial climate and soil here. It is a native of a southern clime, and requires just such a warm, light soil as we can here furnish it with.

Bread, meat and clothing, every cotton plantation *should and can* furnish for its own consumption, and even for sale, and yet grow as much cotton as should be grown. In fact, there is not a doubt, but if such a system could be generally introduced, cotton would again command a remunerative price. Other items should be included—comforts instead of blankets; leather for shoes and harness; tobacco for the negroes; bagging made at home, of cotton; hay grown for stock and for sale; all the mules and horses needed, raised at home; a flock of sheep kept, sufficient not only to clothe the negroes, but to afford a considerable return for wool and mutton; butter made for sale, the buttermilk being decidedly more wholesome for the negroes, young and old, than sweet milk, especially in summer, and any tidy old woman can easily make more in the dairy than in the field; and many other ways in which hands can be employed to at least *as great advantage and profit* as in the cotton crop—with the very great additional advantage of thereby lessening the ruinous over-production of that staple.

I have already written you, thus far, a most egotistical letter; too much so; and yet I do not see how I can so well sustain my assertion, as to the practicability of this change in our system of farming, as by giving my own experience. True, this experience has not been great—but it has this advantage, that though but of three years standing, it has been acquired in the face of serious difficulties. I had every thing to buy but corn—and even some little of that. So, with your leave, I will continue as I have begun, and give you a little more of *Ego!*—premising, that in good and economical management, I am far, far behind many of the planters of this region, *as yet*.

Corn can be grown here quite as well as in New-York, notwithstanding the opinion of that *enlightened southern gentleman*, who made such wonderful discoveries relative to the climate of the south—see the garbled edition of Johnson's Farmers' Encyclopedia. I am now offering 2,000 bu. of corn for sale, being my surplus of this year's crop, over the requisite supply for that plantation. Wheat, also, will do well at least two seasons in three; if we had a sort sufficiently early to ripen before excessive warm weather, I do not believe this crop would be any more subject to failure than with you. The "Valparaiso," of which I received a small quantity of seed through the Patent office, was entirely destroyed, this year, by rust. It tillered well, and the heads when coming in bloom, were very large. I mean to secure a supply of all of Mr. Harmon's sorts against another season. Egyptian or winter oats do remarkably well. They are sown in September or October, and afford capital pasture all winter, and a fine yield of grain, ripe early in May. Forty bushels is spoken of as a good, fair crop; one bushel sown produced me twenty. I prefer this grain to rye. It commands readily from sixty cents to a dollar, according to the supply. My pea crops, with the gleanings of the sweet potatoe lots, will fatten my hogs this year—a trifling quantity of corn *may* be needed. Of sweet potatoes, turneps, Irish potatoes, white beans, rice, hay, fodder, pindars, &c., I have hitherto found no difficulty in growing in abundance.

Cattle, unless where the range is extensive and good, or where the planter has formed good Bermuda pastures, I do not consider profitable stock here—at all events, by no means as much so as sheep, hogs or mules. To raise one's own meat, requires a good deal of care and attention—but it can be done profitably and advantageously on any cotton plantation. A little over two years ago, I commenced operations with eight thorough bred Berkshire sows, as many good common ones, and two or three fine boars, of different families of Berkshires, including imported Newberry. This fall I will kill a fair supply of meat, and offer some thirty or forty fine young, in-pig sows for sale, being unwilling to kill them while they are so much needed in the south. I offer them at less than the price of a barrel of pork each—$10. I lost, last spring, over one hundred pigs and shoats of a disease in the throat, caused, I believe, by their eating young cuckle-bur plants. Such, too, is the opinion of my overseer who had charge of them—Mr. Hamilton—a very intelligent, observing man. When turned out of the field where these grew, the hogs ceased dying and got well—when put back there they became sick again, and many died off. In addition to this, I have lost, in spite of every precaution, a good many through my own and my neighbors' negroes—no matter how much meat they may get, both salt and fresh, the negroes have a particular liking for fresh pig, killed and cooked *on the sly*, as school-boys say. All this, however, *can* be prevented. And even supposing that from ten good sows, one hand devoting his entire time and attention to them and their produce, 50 hogs of 200 lbs. each can be killed per annum, that hand is doing a fourfold better business than at growing cotton. Moreover, the hogs being during the picking season in the pea field, the services of the hand can be had at that time, when they are most valuable. I think I can have two hands supply the slaughter pen with three hundred fine fat hogs, each year, and attend to the breeding and stock hogs also. I feed much cotton seed, thoroughly cooked, and a small proportion of meal, with salt and ashes added, and occasionally pumpkins and turneps, boiled with it—and with decided economy and advantage. For sheep, as I have often asserted, this is the finest country I have ever seen, and I think myself tolerably good authority in the matter. This, however, may very fairly form the subject of a separate article.

Clothing—this too, requires time and attention; but there is nothing else needed to enable any force of negroes to manufacture the material for their own clothing, *with profit* to their owners. During winter the women cannot be so well employed in any way as in spinning up the wool—particularly where a carding machine is accessible. One woman, keeping a spinning machine and a loom going all the year, would spin the warp and weave the cloth for a very large place. Those spinning machines are a great convenience—they spin six threads at a time—the gin saws taking the cotton from the seed—the brush placing it on the cards when ginned, where it is carded, and then spun direct from the cards, all at one operation. Mine was made by Pearce & Co., Cincinnati, and cost $130. We have now, in Natchez, a very excellent manufactory established, and now in the hands of a most energetic business man—Mr. McAllister, of the firm of McAllister & Watson—who is proving that such a concern will succeed in the south, afford a profit to the manufacturer, and be a great source of convenience and economy to the planter. Linsey, jeans, all kinds of cotton goods, including *bagging* and sacking, bale rope and twine, &c. &c. Also *burring* and carding wool at so much per pound. Mr. McA. began by pledging himself that he would manufacture for the planter, from his own cotton and wool, fabrics of any kind to cost him, at least, *no more* than he could buy it for of northern manufacture, allowing a fair price for the raw material. The cotton bagging, made for Mr. Isaac Dunbar, out of most indifferent cotton, worth perhaps one or two cents per pound, is a very superior article—better, in the opinion of many, than the hemp article. I have little doubt that the cotton shipped from Natchez will be, half of it, put up next year in bagging of cotton—if the planters consult their own interest they will do so. If all the cotton made in the Union was packed in this material, we would have the crop lessened or consumption increased rather, to the amount of 22,500,000 pounds, or 56,250 bales—being five yards of bagging, weighing 9 pounds, for two and a half millions of bales. Bale rope and twine would swell the amount to over 70,000 bales.

Mrs. A. is just finishing off a lot of over 50 double and single comforts for the negroes, in place of blankets, which cost an average of about $1.12 each—not counting the labor of making, which in fact may be so much wet weather time of the women's labor saved, and it is well repaid in the difference in the cost of blankets. Had we not made comforts, I would have required over 45 pairs of blankets—difference, to pay for the making of the comforts, at least $120. This has been our first experiment in comforts, though some planters here have used them for many years. The use of comforts has other advantages—see the extra consumption of cotton—then the women are all taught to sew better than they usually do.

Many other items of economical management of the plantation might be mentioned, each of sufficient importance for a separate article; but I must now close, with the hope that every planter who has the good of the south at heart, and who is desirous of lessening the overproduction of our main staple, will never cease to act, to talk and to write with that object in view, until public attention is drawn effectually to it.

Yours, &c. THOMAS AFFLECK.

INDIAN CORN AND POTATOES.

Salt Destructive to the Grub and Wire Worm—Diseased Potatoes.

LUTHER TUCKER, ESQ.—Every experiment which is made by the farmer, whether successful or otherwise, should be published for the benefit of the community. Among the enemies of the corn crop, especially on sward land, the grub and wire worm are pre-eminent. Many expedients have been tried for their destruction, some of which have proved useful, and others have entirely failed.

I had about three acres of sward land which had been in grass for several years, which I plowed in the spring for corn. On turning the sod under, I found the worms in great numbers, and fearful that my crop would be seriously injured by them, I sought for a preventive of their ravages. After it was plowed, I sowed broadcast about one and a half bushels of fine salt to the acre, and harrowed and rolled the land. My seed was prepared by soaking in warm water for about eighteen hours—and I dissolved two ounces of sal ammoniac, and put in the water, in which about a bushel of seed was prepared. The corn was planted the two succeeding days after the salt was sown. The seed germinated very quick, the plants remarkably vigorous, and grew very luxuriantly. Not a single hill during the season, was found injured by the worms, although multitudes of them were in the ground. A neighbor, who occupied a field near mine, and who planted his seed in the ordinary way, lost at least one-third of his field by the worms.

I have no doubt my corn was much benefited by the sal ammoniac, in bringing it forward rapidly, but I have supposed that its preservation from the ravages of the worms, resulted from the application of the salt. The crop was an unusually good one, and ripened very early. The soil was a gravelly loam.

In a field near by the one in which the corn was planted, I had three acres of potatoes. This was sward ground, but rather a sandy soil, with a clay subsoil. The land was manured with a good top dressing of barn-yard manure, previous to plowing. I planted five varieties of potatoes. The Perfectionists or Kelseyites, the seed of which I procured of Dr. H. Wendell of Albany, two years since, and which has proved a very valuable as well as prolific variety. The Pink Eyes, Silver Lake or Chenangoes, Black Ohio potatoe, and the Rohan.

The seed was cut, and the potatoes planted in hills about three feet apart. The potatoes came up well, and for a time advanced as rapidly as could be desired. The *curl* or *rust*, made its appearance when the potatoes were about half grown, and the crop from that cause was very seriously injured. The Pink Eyes, Silver Lake and Black potatoe, were also affected by the disease, which has prevailed so extensively this and the last season, and the crop from that cause diminished full one-third. The Kelseyites and the Rohans escaped the disease. In looking over an agricultural work, containing experiments in agriculture, made in Ireland, under the direction of the Dublin Society in 1773, I find that the *curl* existed at that time in Ireland. The remedy there recommended, *is change of seed every year*, and planting *whole potatoes*. It is there said to have been successful.

In the field of corn alluded to, I planted four rows of potatoes, same kind of seed as the other. These grew finely, were not injured by the curl, nor were they diseased. Their growth and yield equal to the most favored seasons. What was the cause of this difference? Had *the salt any influence* upon the potatoes, and were they benefited by it?

The fact is interesting; and I give it in hopes it may lead to further investigation, and perhaps to some useful result. Yours, B. P. JOHNSON.

Rome, N. Y., Dec. 7, 1844.

PREPARATION AND USE OF CHARCOAL.

Age and business both thickening upon me, I had ceased to write on agricultural subjects; but as I am called on, I come forth, willingly, cheerfully. But first, one word to my son Levi, and others of my sons. Whenever you may write me again, be assured I shall answer, but remember what I told you long ago, "it is hard work for an old man to gather fruit from a tree with so much brush about it."

In the winter and spring of 1842, I made and applied several thousand bushels of coal, mostly combined with the covering of earth and ashes of the pits; not doubting that coal, lying on or about the surface of the earth, absorbs ammonia in dry weather, and gives it to the earth in wet weather. I would not have it finer than the ends of my fingers, and unavoidably down to dust; for it is evident that in proportion to the pulverization, so are the pores destroyed. Towards the close of my operations, my preparation of the coal was to burn two or three pits on the same ground, mixing and casting back the same earth and coal for covering; by which, and a little extra labor with a shovel or hoe, the coal was pulverized to my liking. As to the effect of the pure coal which I pulverized and cast into my cattle yard, I cannot speak, as no test was attempted, but never expect to do the like again; for why should I use coal for securing my already acquired capital, when straw or leaves would answer the same purpose. Better use the coal broadcast to extract and secure capital from the universal fund. Remember that in my operations, the coal, the covering earth, (which is always filled with valuable salts,) and the ashes, were mixed together. This compound was carted out and cast on land in wheat, corn land, oat land, meadow and pasture grounds. The effect on wheat and corn, apparent and decisive, say improvement 15 to 20 per cent; both wheat and corn land inclined to white clay. Effect on oats not visible; land, white clay. Effect on meadow very evident, the grass being lifted thereby from 5 to 6 inches on both dry and wet land. The grass consisted of a mixture of greensward, alias Kentucky blue grass, and red clover.

The pasture ground operated on, was the top of a high poor ridge, which has ever since been closely grazed. On this, white clover and other permanent natural grasses are now about half as thick as I could desire, and suppose that in two more years, the ground will be well sodded. Be it known that this hill is so situated that it would improve without the coal, &c., but I attribute about one-half the improvement to this source.

The earth from a coal pit I would estimate at the outset, to at least as much as the coal; but as the coal is a permanent actor and reactor, it may ultimately perhaps be worth 100 per cent, or even 1,000 per cent more than the earth.

My manner of spreading this manure, is by casting it from the cart in such quantity as to blacken the earth handsomely, and for obvious reasons always keeping the cart on the wind side.

If Liebig's theory as to the action of coal be right, then it must act profitably on all lands wanting manure, except such as are continually wet; but on clay grounds, when plowed down, it has the additional virtue of opening the pores. If then the coal be used as manure separately, I would plow it into clay grounds; and if burnt earth and ashes be used separately, I would cast these on sandy grounds.

He who spreads manure of any kind, but especially coal, has this fund out at interest. It behooves us then to inquire what fund in labor or money we can afford to invest in this way. Let us suppose an acre of ground without improvement, capable of yielding 20 bushels of corn; which corn is worth $8; suppose $5 worth of coal, &c.,

spread on the acre, by which the crop is increased only 12½ per cent, thus creating an annual income of $9, how now stands the case. If you live on the premises twenty years you pocket for one acre a profit of $15—ten acres, $150—one hundred acres, $1500. My son, 12½ per cent profit above a living, will by and by make you rich, and whether this be in meal or malt, no difference. And remember moreover, the additional value of your lands, and the sweat you have saved by the difference in cultivating hard and poor ground, and that which is improved.

I would say to A. J. P. that coal and all other vegetable matter, must in time become earth; but I wish my coal to remain coal as long as possible; for I would value the ammonia which the coal may furnish, much more than the carbon which it would furnish by its decomposition. This winter I intend again to make and spread several thousand bushels of coal. But after all this, I doubt whether it is advisable for my son Levi to do so likewise; for if his lands are by nature black and porous enough, it contains already enough charcoal, or that which is its equivalent. But let me not discourage you, if this be the quality of your lands. I tell you what you can do; just burn your wood, not so much for the coal as for the burnt earth and ashes; and I will warrant the application equally as valuable on such lands, as on that which is sandy. To burn a large quantity of earth, and produce a large quantity of ashes, with a given quantity of wood, you will let the air more copiously in at the bottom of the pit, keep a goodly quantity of earth packed on, and burn the greater length of time. For agricultural purposes, it is best to open a coal pit while rain or snow is falling; or if water be convenient, this can be cast on the coal, by which it is broken or pulverized.

ZA. DRUMMOND.

Amherst Co., Va., Dec. 1844.

AGRICULTURE IN MEXICO—CORN STALK SUGAR.

THE following extract from "Prescott's Conquest of Mexico," (vol 1, p. 134,) recently published in the city of New-York, may be interesting to the readers of the Cultivator:

"Agriculture in Mexico was in the same advanced state as the other arts of social life. In few countries indeed, has it been more respected. It was closely interwoven with the civil and religious institutions of the nation. There were peculiar deities to preside over it; the names of the months and of the religious festivals had more or less reference to it. The public taxes as we have seen, were often paid in agricultural produce. All, except the soldiers and great nobles, even the inhabitants of the cities, cultivated the soil. The work was chiefly done by the men; the women scattering the seed, husking the corn, and taking part only in the lighter labors of the field. In this they presented an honorable contrast to the other tribes of the continent, who imposed the burden of agriculture, severe as it is in the north, on their women. Indeed, the sex was as tenderly regarded by the Aztecs in this matter, as it is in most parts of Europe at the present day."

"There was no want of judgment in the management of their ground. When somewhat exhausted, it was permitted to recover by lying fallow. Its extreme dryness was relieved by canals, with which the land was partially irrigated; and the same end was promoted by severe penalties against the destruction of the woods, with which the country, as already noticed, was well covered before the conquest. Lastly, they provided for their harvests ample granaries, which were admitted by the conquerors to be of admirable construction. In this provision, we see the forecast of civilized man."

"Among the most important articles of husbandry, we may notice the banana, whose facility of cultivation and exuberant returns are so fatal to habits of systematic and hardy industry. Another celebrated plant was the cacao, the fruit of which furnished the chocolate—from the Mexican *chocolatl*—now so common a beverage throughout Europe. The vanilla, confined to a small district of the sea-coast, was used for the same purposes, of flavoring their food and drink, as with us."

"The great staple of the country, as indeed of the American continent, was *maize or Indian corn*, which grew freely along the valleys, and up the steep sides of the Cordilleras to the high level of the table-land. The Aztecs were as curious in its preparation, and as well instructed in its manifold uses, as the most expert New-England housewife. *Its gigantic stalks, in these equinoctial regions, afford a saccharine matter, not found to the same extent in northern latitudes, and supplied the natives with sugar little inferior to that of the cane itself; which was not introduced among them till after the conquest,*" (in 1519.)

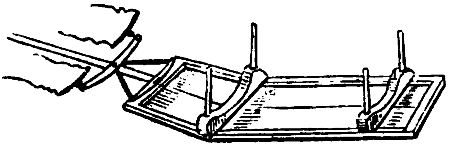
In perusing Prescott's Mexico, the above facts struck me as remarkable. If a semi-civilized nation on the continent of America, more than three hundred years ago, made sugar from the stalks of Indian corn, why may not the more civilized races of the present day in North America, with the aid of art and science, do the same? There is no doubt that it may be done; it has been done. But we have yet to try experiments, to improve the process, and not only to render it practicable, but profitable. As maize was, in the time of Montezuma, *the great staple* of the American continent, so it continues at the present day in its northern portion. Every State and Territory in these U. S. raise it in abundance. In Mr. Ellsworth's report to Congress of the crop of Indian corn, for the year 1842, it is estimated at 441,829,246 bushels. This *great staple* will increase with the rapid increase of our population; and the question will arise, how shall we dispose of our surplus? We can export but small portions to other countries, and must therefore create a market at home, or diminish its cultivation. How we can provide a home market to consume the superabundant crop, applicable to all parts of the country, it is difficult to determine. If maize continues to be as extensively planted as heretofore, it will become as it were a valueless drug, unless we cut a part of the crop when fullest of sap, and convert the expressed juice into sugar. This change of cultivation may not be advisable in all parts of the country. The experiments that have been made, show that it can be done, but in which of the States it can be most advantageously adopted, remains to be decided by other experiments. I feel satisfied that before long, we shall see and consume corn stalk sugar in abundance. I remember when maple sugar could only be obtained of the blackest and coarsest kind, such as was strained through the dirty blankets of the aborigines, and sold in small cakes or birch baskets as a rarity. At the late Fair of the State Society at Poughkeepsie, I saw beautiful specimens of refined maple sugar, and even rock candy, which had never before been made from the sap of the maple tree. The march of improvement is onward, and we shall see sugar from maize gradually introduced, as the process of granulation and refinement is improved, as has been the case with maple sugar.

It is encouraging to the husbandmen of our country to know that there was a time when cotton, and wool, and silk, and sugar from the cane, were not raised in the United States, while they are now firmly established. Maple sugar was always made in small quantity, but of late years, a large amount is manufactured, and refined equal to the best of imported sugar. So will corn stalk sugar be gradually improved and introduced. In some countries, sugar is a mere luxury, but with most of the people of the United States, it is a necessary article of consumption. In addition to the sugar imported, there was made in the country in 1842, (as by Mr. Ellsworth's report,) 142,445,199 lbs. Every State in the Union except Delaware, makes sugar; the southern States, from the sugar cane, and the northern and western States from the maple, (Acer saccharinum.) To supply the place of foreign sugar, let us persevere, until the manufacture of sugar from maize shall render it unnecessary to import the article.

RICHMOND.

Oakland Farm, Staten Island, Nov. 25, 1844.

LABELING SEEDS.—The Southern Cultivator furnishes a good hint to seedsmen, at all events a valuable one for purchasers—that it would be better to put upon them the date of the year in which they were raised, instead of the usual "*Warranted fresh.*"



STONE-BOAT OR SLED—(Fig. 11.)

The accompanying figure represents a simple but very useful implement, which no farmer should be without. It is nothing new, except the tongue. I am induced to present it to the public, by seeing its usefulness tested in smoothing down roads previous to freezing. If each pathmaster (or road supervisor) would procure one and go over his district, just before freezing up, it would confer a greater public benefit than the same amount of labor bestowed in any other way, by making a smooth sleigh track through the winter. I have represented it with saddles or bolsters for drawing logs, which can be taken off when it is wanted for any other use. They are used by the sawyers in this region to draw logs into the mill from remote parts of the yard. Large saw logs are easily loaded, and more easily removed in this than in any other way, even on bare ground. If the farmer is obliged to convey any thing over the roads, when they are partially frozen, this will draw more easily than any thing else; and instead of being like the wagon, detrimental to the road, is actually beneficial.

It is made of two or more plank, according to their width. They may be sawn in a sawmill, by cutting part one way, and then reversing the ends of the log and sawing the other. The tongue is attached by means of eyes passing through the fore part, secured by nuts; these are easily taken off when wanted for summer use in drawing stone.
Jason Smith.

Tyre, N. Y., 1844.

SCIENCE OF AGRICULTURE.

Lectures on the Application of Chemistry and Geology to Agriculture. By Jas. F. W. Johnston—Part 4th, 8 vo. pp. 135. Wiley & Putnam, New-York.

This valuable work, as it was issued from the press of this country, has been noticed in preceding pages of the Cultivator. But when we called the attention of the agricultural community to the two volumes published in the city of New-York by Wiley & Putnam, the fourth part was still wanting. We now have that fourth part given to the public by the same publishers, and it completes the work, and when the several parts are put together it will form one octavo volume of 620 pages.

If the first, second, and third parts were valuable and interesting, the concluding fourth part is still more so. To the farmers of New-York, who feed stock to make butter and cheese, the twentieth lecture, *On Milk and its Products*, is worth more than any heretofore published work on these subjects. It contains, in a condensed form, under distinct heads, all that is desirable to be known in relation to butter and cheese as made in Europe. And although it may not be practicable in this country, to follow all the directions given in this lecture, yet the skillful agriculturist will find much information by which he may be benefited. To those who make cheese for export to England, the various methods of preparing it in that country will give him hints calculated to make it suitable to the taste of his customers.

On another occasion we stated in the Cultivator, the necessity of having pure salt to make good butter. Johnston in the above mentioned lecture corroborates our former expressed opinion by the following remarks:

"The salt should be as pure as possible, as free, at least, from lime and magnesia as it can be obtained, since these substances are apt to give it a bitter or other disagreeable taste. It is easy, however, to purify the common salt of the shops from these impurities, by pouring a couple of quarts of boiling water upon a stone or two of salt, stirring the whole well about, now and then, for a couple of hours, and afterwards straining it through a clean cloth. The water which runs through is a saturated solution of salt, and contains all the impurities, but may be used for common culinary purposes, or may be mixed with the food of the cattle. The salt which remains on the cloth is free from the soluble salts of lime and magnesia, and may be hung up in the cloth till it is dry enough to be used for mixing with the butter or with cheese." (p. 565.)

Johnston's work comes to us in the form of Lectures as they were delivered to a class of farmers in England. They were published in parts as the lecturer gave them to the press after delivery. The fourth now before us completes the series, and contains three lectures, being the 19th, 20th, and 21st of the entire course. These three treat respectively—*Of the Produce of the Soil—Of Milk and its Products—Of the feeding of Animals and the purposes served by the Food.* Each of these lectures is a treasure to the farmer. They are published in a small octavo volume by themselves, by Wiley & Putnam, (Broadway, New-York, price 31 cents.) The entire series of twenty-one lectures may also be obtained of them and other booksellers, in a handsomely bound volume of 620 pages for one dollar and fifty cents. The work is the most valuable of any of the late publications on agriculture. We do not mean by this commendation to depreciate the labors of Liebig. He pointed out many new chemical facts applicable to the improvement of agriculture, (some of which however were more theoretical than practical,) and he led the way for Johnston and others to profit by his labors, and render them practically useful. Johnston has done so in an eminent degree, and his work is a pearl to all practical farmers.

In the commencement of the 21st and last lecture he treats of the substances of which the parts of animals consist, viz: the muscles, the fat, the bones, hair, horn, wool, &c. He then in the second section asks—*Whence does the body obtain these substances? Are they contained in the food?* And continues—

"Whence does the body derive all the substances of which its several parts consist?"

"The answer to this question appears at first sight to be easy. They must be obtained from the food. But when the inquiry is further considered, a reply to it is not so readily given.

"It is true, indeed, that the organic part of the food contains carbon, hydrogen, oxygen, and nitrogen—the elements of which the organic parts of the body are composed. The *inorganic* matter also which exists in the food contains the lime, the magnesia, the potash, the soda, the sulphur, the phosphorus, and the iron which exist in the inorganic parts of the animal body—so that the question seems already resolved. The body obtains from the food all the elements of which it consists, and if these be not present in the food, the body of the animal cannot be properly built up and supported.

"But to the chemist and physiologist the more important part of the question still remains. *In what state do these elements enter into the body?* Are the substances of which the food consists decomposed after they are taken into the stomach? Are their parts first torn asunder and then reunited in a different way, so as to form the chemical compounds of which the muscles, bones and blood consist? Are the vital powers bound to labor, as it were for the existence and support of the body? Do they compound or build up, out of their ultimate elements, the various substances of which the body is composed—or do they obtain these substances ready prepared from the vegetable food on which animals in general are fed? The answer which recent chemical researches give to this second question, forms one of the most beautiful contributions which have been made to animal physiology in our time.

"We have seen that the flour of wheat and other cultivated grains consists in part of gluten, of albumen, or of casein. These substances all contain nitrogen, and are identical in constitution with each other, and with the fibrine of which the muscles of animals chiefly consist. The substance of the muscles exists ready formed, therefore, in the food which the animal eats. The labor of the stomach is in consequence restricted to that of merely selecting these substances from the food and dispatching them to the several parts of the body, where they are required. The plant compounds and prepares the materials of the muscles—the stomach only picks out the bricks, as it were, from the other building materials, and sends them forward to be placed where they happen to be wanted." (p. 589.)

Here we find the author of these lectures agreeing with Dumas and Boussingault in a work recently published in this country by the title of "The Balance of Organic Nature,"—but these opinions were also entertained by Liebig.

The animal frame receives a portion of its substance from the atmosphere, and expels carbon from the lungs. On the subject of respiration Johnston observes (p. 594) as follows:

"But for what purpose essential to life do animals respire? If the starch and sugar (as previously stated) be so necessary to feed the respiration—the breathing itself must be of vital importance to the living animal.

"Some doubts still exist upon this point. It is generally believed, however, that carbon is consumed or given off from the lungs for the purpose of sustaining the heat of the living body. When starch, or sugar, or gum, are burned in the open air, they are changed into carbonic acid and water, and at the same time produce much heat. It is supposed that in the body the same change—the conversion of starch and sugar into carbonic acid and water—taking place, heat must in like manner be produced. A slow combustion, in short, is supposed to be going on in the interior of the animal—the heat of the body being greater, in proportion to the quantity of carbonic acid given off from the lungs. In favor of this view many strong reasons have been advanced, but there are also objections against it of considerable weight which cannot as yet be satisfactorily removed."

"Were we to adopt this opinion in regard to the main purposes served by respiration as the true one, it would afford a very distinct reason for the large amount of starch existing in all our cultivated crops. Respiration, according to this view, is necessary to supply heat to the animal, and this respiration is most simply and easily fed by the starch contained in the vegetable food. The life and labors of the plant again minister to the life and labors of the animal."

That animal heat was derived from respiration was long since pointed out by Lavoisier in France, and Priestley in England, but they were not so certain as to the manner of its production.

"By the separation of carbonic acid (says our author, p. 596, note) which may be given off by the lungs—of water, which may or may not remain in the system—and of a portion of oxygen which may be used up in various ways in the blood, the starch or sugar of the food may be converted into fat.

"That in some such way these substances may be changed into the fat of animals, was first insisted upon and explained by Liebig, and it is probable, as I have said in the text, that in cases of emergency fat is really formed in the animal body from such kinds of food. But when Liebig put forth his views on this subject, it was not known that vegetable substances naturally contained so large a proportion of fat as has since been found in them. The necessity for the constant production or formation of fat in the body itself, therefore, is not now so apparent, and the soundest opinion, according to our present knowledge, seems to be that, while the vegetable food *usually* supplies all the fat ready formed which the animal requires, yet that a conversion of a certain part of the starch, gum, sugar, and even of the cellular fibre of the food, into fat, may take place, when all the wants of the body are not supplied by the fat which the food naturally contains. Of course this opinion applies only to animals in perfect health. In certain diseased states of the body a larger and more constant production of fat from the food may take place, as appears to be the case in animals which no diminution of food seems to prevent from laying on fat."

In the seventh section of the 21st lecture (p. 500) Johnston affirms that the health of the animal can be sustained only by a mixed food. From this summary we may learn a valuable lesson in dispensing food to animals, and the Graham philosophers may read a lesson that will teach them how to live.

"From what I have already stated, you see that the vegetable food eaten by a full grown animal for the purpose of keeping up its condition, should contain:

"1st. *Starch or sugar*, to supply the carbon given off in respiration.

"2d. *Fat or fatty oil*, to supply the fatty matter which exists more or less abundantly in the bodies of all animals.

"3d. *Gluten and fibrin*, to make up for the natural waste of the muscles and cartilage.

"4th. *Earthy phosphates*, to supply what is removed from the bones of the full grown animal by the daily waste, and—

"5th. *Saline substances*—sulphates and chlorides—to replace what is daily rejected in the excretions.

"Hence the food upon which any animal can be fed with the hope of maintaining it in a healthy state must be a mixed food. Starch or sugar alone, or pure fibrin or gelatine alone, will not sustain the animal body, because these substances do not contain what is necessary to build up all its parts, or to supply what is daily given off during respiration and in the excretions. The skillful feeder, therefore, will not attempt to maintain his stock on any kind of food which does not contain a sufficient supply of every one of the kinds of matter which the body requires."

There is much in these three lectures to interest the scholar, the man of leisure, or even the laborious farmer, who may read, and read again, and advantageously appropriate the information therein contained, as well as in the preceding parts before published. We will conclude our remarks on Johnston by giving his concluding summary, which, to those who have not read his work, will explain its nature and contents.

"§ 18. Concluding section." (p. 519.)

"I have now brought the subject of these lectures to a close. I have gone over the whole ground which in the outset I proposed to tread. It is the first time, I believe, that much of it has been trodden by scientific men, and I have endeavored in every part of our journey to lay before you, as clearly as I could, every thing we knew of the country we passed over, in so far as it had a practical bearing, or was likely to be susceptible hereafter of a practical application.

"In the first Part, I directed your attention to the organic portion of plants—showed you of what substances it consisted—on what kind of organic food plants live—and by what chemical changes the peculiar organic compounds of which they consist, are formed out of the organic food on which they live.

"In the second Part, I explained in a similar way, the nature, composition, and origin of the inorganic portion of plants. I dwelt also, upon the nature, origin and natural differences which exist among the soils on which our crops are grown, and from which the inorganic constituents of plants are altogether derived. This led me to explain the connection which exists between agriculture and geology, and the kind of light which this interesting science is fitted to throw upon the means of practically improving the soil.

"In the third Part, I dwelt upon the various means which may be adopted for increasing the general productiveness of the land—whether these means be of a mechanical or chemical nature. The whole doctrine of manures was here discussed, and many suggestions offered to your notice, which have already led to interesting practical results.

"In the fourth Part, I have explained the chemical composition of the several kinds of vegetable produce which are usually raised for food—showed upon what constituents their nutritive values depend—and how soil, climate and manure, affect their composition and their value as food. The nature and composition of milk and its products, butter and cheese—the theory of their manufacture, and the circumstances upon which their respective quantities and qualities depend—and lastly the way in which food acts upon and supports the animal body, and how the value of the manures they make is dependent upon the purpose for which the animal is fed—

these subjects have also been considered and discussed in this fourth Part.

"In discussing new topics I have had occasion to bring before you many new views. This, however, I have not done lightly or without consideration, and I feel it to have been one of the greatest advantages which have attended the periodical form in which these lectures have been brought before the public, that it has allowed me leisure to think, to inquire, and to make experiments in regard to points upon which it was difficult at first to throw any satisfactory light. It is gratifying to me to know that the general diffusion which these lectures have obtained, has already done some service to the agriculture of the country."

That country is England, and if the husbandmen of New-York, or other parts of the United States, should purchase and read and study Johnston's Lectures, they would be amply compensated, as believes their friend and fellow countryman,

November 12, 1844. A PRACTICAL FARMER.

AN EXPERIMENTAL FARM—No. I.

IN this great state there are not far from eleven millions of acres under cultivation. In working these lands there is a vast amount of labor—I will not attempt to say how much—annually expended. As a practical question, and one of great moment, allow me to inquire: On what does the productive value of all this land and labor mainly depend?

For agricultural purposes, land without labor is valueless. This is demonstrated by the utter worthlessness of the products of the one thousand millions of acres in our national domain. Labor, then, is the one thing valuable. But the question still returns: Wherein consists the value of agricultural labor? Is it in the mechanical power of human bone and muscle; or in the intelligence of the directing mind? If in the former, as many seem to believe, then the labor of an ox is worth more than that of seven intelligent men. But with no mind to direct it, what is the strength of a thousand oxen, or of ten thousand demented persons' worth? This is a practical question, affecting the intrinsic value of labor, which every one, whether he have labor to sell, or to purchase, should study and understand.

There are at least a million of persons constantly employed in rural pursuits in the empire state. If all this honest toil can be made far more productive than it now is, and hence, be far better rewarded, who will complain? Probably no human being. The value of this rural industry, we have seen, is justly measured by the professional knowledge of those that direct, either wisely, or *unwisely*, all its operations. To increase largely the amount of this professional knowledge, and cheapen its cost to every practical farmer in New-York, there should be somewhere in the state a well conducted Experimental Farm, in connection with an Agricultural School.

Agriculture is essentially an experimental science. Its experiments and complicated details require much skill to decide accurately the value of any system of farming under different circumstances. That great improvements have been made, and that greater still may be achieved, no one can doubt who has investigated the subject. Every practical agriculturist knows that a single grain of wheat will often send up ten or more stems, and that each stem or stalk will bear an ear containing 100 or more seeds. This gives a yield of 1000 fold. Twenty-five hundred kernels of good wheat, and more of corn, have been harvested from one of either.

By planting wheat with a drilling machine that drops one seed in a place, and at a proper uniform distance asunder, that the air may circulate freely through the whole field, and by supplying each plant with all the ingredients in a soluble condition at its roots, necessary to build up its entire structure, it is believed by some that 100 bushels may be profitably grown on an acre. The raw materials required by nature to elaborate 100 bushels of wheat are not expensive. An experimental farm is needed to demonstrate practically from what sources these ingredients can be obtained at the smallest expense: and how they should be combined so that every plant may have its productive power developed to the fullest extent, and yet the farmer lose not one particle of the raw material not transformed into grain.

A moment's reflection will convince any one that in the production of any organic being, not a particle of matter is created. Every farmer knows that the leanness or fatness of his domestic animals, and cultivated plants, depends, mainly, on the scarcity or abundance of their food. To prepare this food for all our plants and animals, and to work it up without loss, and to the best possible advantage, is a *study* of great practical importance. The manufacture of breadstuffs, provisions, wool, cotton, flax and hemp, from certain raw materials, which God has provided most abundantly in the air, in water and in the soil, must ever be regarded as the most important branches of human industry. There are, however, millions of competitors in the manufacture of all these articles; and it is saying no more than the truth to remark that their numbers and their zeal are alike increasing with astonishing rapidity. Believe it who may, the time is close at hand when the entire profits of agricultural labor will depend on one's knowledge of the unerring laws of nature, his working in unison therewith, and never in opposition thereto.

Look at that locomotive. A knowledge of the laws of nature enables a man to make a little hot water and steam, draw a load for 200 horses, and travel at the rate of 20 miles an hour. Tell me, gentle reader, have the laws of nature nothing to do with the fertilizing of the earth? Have we nothing to learn in relation to the multiplication of plants and animals?

Exclusive of a small portion of earthy matter, all plants and all animals are nothing more than CONSOLIDATED AIR.

Four simple aeriform bodies, carbon, nitrogen, oxygen and hydrogen—the two latter being water—make up the whole catalogue of organic life, including man himself. Thanks to infinite benevolence, the air is full of bread, of meat, of clothing, and of fire! All gratitude is due to that Creator, who has made it impracticable for any selfish mortal to claim an exclusive title to any portion of the ever moving atmosphere, or to the rain and sunshine of heaven. The whole earth too, is full of silica, alumina, lime, potash, soda, magnesia, and the other minerals which enter into the composition of plants, and of animals. With all these materials furnished to our hands, with mental powers that derive their highest pleasure and dignity, from the investigation of the works of Providence, what is gold, what are deeded acres, to that knowledge which renders a rational being so nearly independent for every physical and intellectual comfort, if it do not also give him a higher, stronger hope of something better beyond the grave?

The fact is worthy of consideration that scientific, experimental farming has added more to the population of the island of Great Britain, within the last 44 years, than it had increased during the 423 years ending with the close of the 18th century. This wonderful and sudden increase of the human family has occurred in spite of the wars which desolated Europe for 15 years in this century, till the great battle of Waterloo; and in spite of the tens and hundreds of thousands of native Englishmen, who have emigrated to British colonies, to distant coasts and islands, and to foreign nations. As yet the prolific light of science has hardly begun to shine on the cultivated fields of "old England." It was but yesterday that the governments of Europe saw the folly and madness of human butchery, and wisely resolved "to beat their spears into pruning hooks, and their swords into plowshares." This is now done, and with the increased means for the support of our race, the human family are multiplying on the continent with a rapidity that has no parallel in the history of the world. Labor saving machinery in a thousand forms, serves to keep millions from mechanical pursuits. In all these operations, steam performs the labor of human hands. Hence, rural industry is very cheap, and the price of all agricultural products is constantly on the decline.

Soon to be excluded from all foreign markets, with our vast and fertile prairies under cultivation, can we, the farmers of New-York, safely neglect to cheapen, as far as practicable, the cost of raising whatever we have to sell?

Many of us have sons whose condition in life and standing in society, will depend on their ability to make property by farming; and I will add their ability to keep what their honest labor shall command, from the "itching palms" of those that study to acquire, not produce, the good things of this world. The science of keeping property, as well as that of producing it by the successful cultivation of the earth, I regard as a matter worthy to be taught in agricultural schools. Indeed, I have long contended that instruction in this useful branch of knowledge is too much overlooked in all our public schools and higher seminaries of learning.

Notwithstanding all the improvements in the useful arts, in science, and in labor saving machinery, by which one man performs the work of ten, the statistics of all civilized nations reveal the startling facts that Pauperism, Crime, and Insanity, increase faster than population. It is known that steam in Great Britain does the work of millions of human beings, and yet Mr. Colman states on what he regards as good authority, that there are in England and Wales a million and seventy thousand public paupers! In our own state the expense of supporting the poor last year, if I mistake not, exceeded $700,000. Over $17,000 "poor accounts," or accounts for taking care of the poor, have just been allowed by the board of supervisors in Erie county: nor is this an unusual sum. As God has given to each person but one pair of hands to work and provide food for one stomach, which must be fed three times every day—to work, and provide clothing for one naked back, a shelter for one houseless head, and for all its physical wants in infancy, sickness, and old age, it is plain that, if one person shall acquire a sum equal to the entire earnings of ten pairs of hands, some of the mouths attached by nature to these ten pairs of hands may go hungry. They may lack clothing and lack shelter, simply because they do not know so well how to keep and enjoy the fruits of their own industry, as other members of the society in which they live know how to exchange their shadows for the laboring man's substance.

Of what avail is it to a man that the annual product of his labor be increased fivefold, if he despise knowledge and allow his joints to be treated like gudgeons running under water, that never receive one drop of oil?

Farmers are much in the habit of changing work with merchants and professional gentlemen. The exchange is generally made after this fashion: The man who has devoted his life to the study and practice of agriculture, gives six days of his labor for one of the merchant or of the dealer in law or medicine. If either of the latter can find employment at this rate throughout the year, he may consume the entire product of one pair of hands, and lay up a sum equal to the whole earnings of five tillers of the soil. Estimating the value of this agricultural labor at $200 per hand, or at $1,000 for the five, instead of paying $70 a year to the laboring man who created this property, in the shape of interest, the man who has *acquired* it, lends it to the very men that produced it, and to their children after them, as a fair equivalent for 100 days work every year at 70 cents a day!

Let me suppose there was property sold in the year 1820, at 150 millions of dollars, in this great state, subject to an interest (less than 7 per cent) which would double the principle in 12 years. Call the population of the state at that time 1,250,000, which is not far from the truth. Since 1820 the population has doubled, or it is now 2,500,000. Look now after the property of $150,000,000 at interest. In 1832 it was 300 millions, in 1844 600 millions. While this dead matter, called sometimes gold and silver, at others something else, which can neither move, think, nor do the least thing whatever, has increased fourfold, and drawn from human thought and muscle 450 millions, without paying the debt, the number of laboring hands in the state to work and pay the interest on 600 millions is only double the number which had to pay the interest on the original debt of 150 millions. If the tax on labor increase twice as fast as population, what but increasing poverty and crime can result?

I have stated the above facts to demonstrate the reason *why*, pauperism is increasing so rapidly in the Empire state. In this free and civilized land we call the *annual service* of $5,000 in gold, which needs no food nor raiment, and which will last a thousand years, worth $7 per cent, or $350. To pay this, in the plenitude of our kindness to humanity, which unfortunately must be fed and clothed, we usually allow for labor one dollar a day. In England they lend gold at 3½ per cent, and credit labor fifty cents a day. In France and Germany gold is loaned at 2 per cent and labor credited about 25 cents a day.

The great error in all this matter is committed by the borrower, not the lender, in each of these countries. No man, as a general rule, is compelled to run into debt, when he begins in the world. If all interest on money were abolished, it would not prevent in the least, ignorant or foolish men, from selling their labor, or its products, at a price less than their value. *Knowledge* is the one thing indispensable, not less to keep, than to produce, the comforts of life. By trading and gambling a man may draw a prize; but the chances are that he will buy a blank. When every human intellect shall know how to make one pair of hands work to the best advantage; and also how to keep and enjoy what they produce, to bless himself and his own household, pauperism, crime and insanity will be nearly banished from the world. When no man can obtain wealth except by the sweat of his own face, over and above what he consumes, he will no longer cherish that morbid "love of money" which the Bible denounces as "the root of all evil." The equality of condition, which would result from every man's keeping the fruit of his labor or a fair equivalent, would remove the exciting cause of much of the pride, envy, extravagance, idleness, vice and disease, which now afflict those that needlessly violate the laws of their being. If our Maker designed that one rational being should consume the entire products of three hands, and another live on the products of one hand, would he not have given three hands to the body which needed their mechanical service, and only one hand to the body which required the labor of one only?

Buffalo, Nov. 27, 1844. D. Lee.

INJURIOUS EFFECTS OF IRON IN SOILS.

L. Tucker, Esq.—Much has been said and written, not only on the source whence plants derive their substance, but on their ability (instinctive?) to select their appropriate food and to reject all other.

I think there are some *facts*, which go to show that plants are not much more intelligent than animals in this respect. We have lately had statements in relation to the effects of common salt on fruit trees, good or bad according to quantity or other circumstances, and in one instance it has been averred that the salt went into and destroyed the flavor of the fruit.

I have about two acres on one side of my farm, lying about two feet below the general level, which, when first cultivated, had a dark brown, and what was thought an extremely rich appearance. But, alas, nothing valuable would grow on it. I satisfied myself that the sandy loam contained large quantities of iron, (perhaps sulphuret of iron or pyrites.) Most of this I have thrown into ridges, and drained it as well as the position admits, and supplied it pretty liberally with quick lime. It has produced a good crop of oats and peas, and the clover on it looks well.

Now for a *fact*, which I think is a proof that plants absorb by their spongioles or rootlets, substances which are not only poisonous, but which they can neither reject nor expel. My cornfield had a small corner project into this low plat, which had not been limed. Until the plants were some inches high, no difference was observed; but then it began to falter, and soon the leaves were beautifully striped with various shades, from a crimson to a corboo or reddish brown color. In another spot, some rods distant, in the midst of a healthy growth, was a patch of about a square rod, in which the appearance was the same. On this, the plants never exceeded 12 or 15 inches in height. On examining the roots, they were found corroded and eaten off in all directions, and thousands of little lateral rootlets thrown out to be corroded in their turn, and so on till death decided the struggle. Perhaps I shall be told the coloring matter in the leaves was not oxyd of iron. I have not said it was, and as I did not analyze it, I shall not so affirm; but I have no more doubt in my mind that some compound of that metal was the cause of both the color and death of the roots, than I should have with any proof short of positive.

My wish is to make this subject, not only one to stimulate investigation, but, as I know many hundred pieces of such soil, to advise those who have it, to apply quick lime in autumn, and mix it to a moderate depth with the soil in the spring. Yours truly,

Norridgewock, Me., Nov. 25, 1844. JAMES BATES.

SUGAR CANE—ITS CULTURE IN LOUISIANA.

MR. L. TUCKER—The plants we cut and matlay in beds, during the autumn, usually in October, previous to the sugar making season, and before the canes are injured by frosts. Often the unripe tops, which would otherwise be thrown away, are winrowed for plants. The best plant cane we usually save for plants; because they are the easiest put up, and the quickest planted; for time and saving of labor are money. Besides, by planting the whole stalk, it grows more vigorously than the tops, especially in a dry season.

After the sugar making season is over, which usually is about the first of January, we prepare our land, designed for cane, by plowing and harrowing, breaking it from four to eight inches deep: the stiffer the land, the deeper the plowing is necessary to protect it from drouth. Thus prepared, the ground is laid off in rows, with a two horse plow, about 6 feet apart, (some plant as close as four feet.) In these furrows, a double mould board plow, with one horse, is run; in order to clear the furrows of lumps and sods, and also to deepen and widen the furrows; as it is necessary to put the plants several inches below the surface; otherwise the cane would require too much hilling, especially the second and third years.

The plants are now taken from these mats, and the leaves stripped off, placed in carts, carried and tipped out on the prepared land, and laid lengthwise in the furrows. We plant three canes side by side, or triple; some say one and a half is sufficient. The closer the rows, the less each would require. We now pass along with a cane knife, and cut the cane in pieces, say from two to three feet in length, in order that the canes may lay more level, and because more eyes will vegetate. Being thus placed, they are covered with a plow to the depth required, from one to three inches; over which, a light harrow may be passed. Many prefer to cover with the hoe. Soon as the freezes are over in February, the cane is plowed; running the bar each side the cane, and throwing the furrows from it; the cane, beginning to come up, is scraped, (so called); if covered too deep, the earth is taken off, usually with a hoe, sometimes with a harrow or other machine, and cleaned from grass and weeds. In a few weeks it is again plowed and hoed, and again when necessary, a little earth put to it when required.

The cane by April or May has come up thick in the rows, but usually not so thick but that the stalks, when about a foot and a half or two feet high, send out many new stools or shoots from the bottom of the stalk; and if they come out early, grow and mature equal to the main stalk. It is usual to give it three or four workings and in the last to hill the cane three or four inches, and sufficiently high to protect the lower eyes on the stalks from freezing during the winter. Those eyes vegetate next season, and produce nearly equal to the first season, on fresh land, and so again the third year, and often longer. Cane is injured by hilling before the stools are sufficiently high; and should receive the last working soon after it is about three feet high; in order to afford more time for ripening. After this period, say in June, it grows very rapidly; the joints begin to appear, and the lower joints begin to ripen, to sweeten; and by the middle of October usually ripen from two to four feet from the bottom, and continue to ripen about a joint, or six inches, a week, till they are cut for the mill; or till the freeze comes; or till they are cut to winrow, in order to secure them from an anticipated freeze. About the middle of October we commence making sugar. Each hand takes a row, first cuts the tops of the stalks off just below the green leaves, and drops them on the ground or lays them in winrow, if designed for plants; then, with the knife, (the blade of which is about 18 inches in length and two inches in breadth), the dry leaves are stripped from the stalks, and the cane is cut close to the ground, the left hand at the same time has hold of the canes thus cut, and places them in small heaps, convenient for loading into carts, drawn by horses, mules, or oxen. Other hands load the cane, and it is hauled to the mill.

The cane fields are all ditched, usually every acre in width, with cross ditches about every five acres. No water is allowed to remain on the surface. The cultivation is as simple as that of broom corn, and the young shoot far more vigorous.

Cane stalks usually grow from 6 to 9 feet high. The leaves shoot up two or three feet higher. Cane ripens in favorable seasons within 12 or 18 inches of the top. You will perceive we plant one-third of our cane land or crop yearly; two-thirds coming from the rattoons.

New River, La., Aug. 1844. S. TILLOTSON.

POTATO ONIONS.

FROM some remarks upon this species of onion, in the October number of the "Cultivator," it seems that farmers generally are not much acquainted with it. A brief description of its qualities and the mode of cultivating it, may therefore be acceptable to some of your readers.

Its mode of propagation is peculiar. A large onion, set in the ground early in spring, breaks into several (5 to 15) separate onions, which grow in a cluster of three or four good sized bulbs at the bottom, and a number of small ones lying on the top. These last vary in size from that of a nutmeg to that of a small hen's egg. The small ones are the seed for the next year's crop. The smallest will grow into very large, single bulbs; while the larger ones will grow into two or three middling sized onions. The average annual increase, taking large and small together, is about tenfold.

This description will readily suggest the proper mode of cultivation—which is to set out the small onions for the purpose of producing the large ones, for table use—and to set out a sufficient number of large onions for the purpose of producing the small ones for seed. The first should have a moderately rich soil, the last a soil rather barren.

The onions should be put into the ground as early in spring as the season will admit. After the ground is made mellow, set the onions in rows far enough apart to allow a hoe to pass between them. They may stand 3 to 4 inches apart in the rows. Just cover them with earth. They may be stuck into the ground with the thumb and finger. They need no further care, but to be kept free from weeds.

To preserve them, they are gathered with a potatoe hook, as soon as the tops are dried, and then spread for a few days on the barn floor, or some other dry place. I formerly kept them over winter on a scaffolding in my barn; but having lost about 70 bushels by the severe winter of 1834–5,[*] (thermometer 23° below zero,) I have since put them into my cellar, which happens to be a very dry one, where they keep perfectly well, on a crib with a bottom of laths far enough apart (¾ of an inch) to permit a circulation of air through them. Thus managed they keep longer than any other species of onion. I have them suitable for cooking the year round.

In their eating qualities, I do not discover any difference between them and other onions. But for cheapness of cultivation, certainty of crop and amount of produce upon a given space of ground, they surpass all others.

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[*] A curious fact in physiology came under my notice, the spring following, that deserves to be mentioned, though it is foreign to my subject. The rotten onions were thrown out in the spring into the barnyard, where some of them were eaten by hens. This strange food *gave their eggs* a most unimaginable taste—loathsome and nauseous beyond all description.

There is a sort of Eschalot, that has been cultivated and sold for the potato onion. Wherever this fraud has been practiced it has given the onion a bad name. The genuine article, properly cultivated, has, I believe, been universally approved and highly valued.

NOYES DARLING.

New-Haven, Ct., November 19, 1844.

MANAGEMENT OF THE PEACH TREE.

THROUGH the medium of the Cultivator—which my neighbor Tyson says, "finds its way every where," I wish to make known a new theory with regard to the cause of the premature decay of the peach tree; suggesting a mode for the prevention of a malady that has pervaded our orchards, in many instances, to their annihilation; the evil spreading far and wide, and exhibiting an inveteracy of character, that bids defiance to the thousand-and-one *cures* that have been guarantied to follow the adoption of about as many applications, external and internal, that have been made public. I lay it down as a melancholy fact, then, that the evil, whatever it be, and proceeding from whatever cause, has never yet been fully understood, or met by a proper antidote. And this conclusion will be more readily admitted, than the novel doctrine, "that the yellows and the worm proceed from the same source, both being *effects* and not the immediate *causes* of disease;" it being now generally conceded, that our trees are as effectually destroyed by the former as the latter; nay, that trees affected by the yellows, will assuredly be destroyed by it, without the intervention of the worm in any of its stages, and at about the same period of time. Here, then, is one step gained. Then comes the idea that the disease is contagious, and to prevent its spreading, it will be necessary to remove the tree the moment its effects are visible; as, also, that a cure may be effected, by careful culture of the soil, or a top-dressing of alkaline substances, to correct the acidity produced by the putricity of the juices of the tree, it being admitted that oxygen is its basis. But although this treatment might be beneficial as a preventive, the expectation of a radical cure would be hopeless.

A residence in this peach-growing district, affords incidents of the greatest variety, and cases for "practice," innumerable; indeed, it might be regarded as analagous to "walking the hospitals," by the medical student; while frequent examination of the orchards of the large peach-growers of Delaware and elsewhere, have abundantly satisfied me, that the evil is progressing, maugre all the care and industry of men, superlatively endowed by knowledge, experience, intelligence and untiring perseverance, "to the contrary notwithstanding." Now these individuals have religiously kept their orchards under constant tillage, for the sole purpose of preserving the health of their trees; convinced, that without such incessant and careful culture, they could not be kept in existence; yet they find the disease is there, and with all their marling, manuring, and plowing three times a year, that it is rapidly progressing; the only question being, how long has the death of the trees been delayed by a process at once so tedious and expensive? So then, at all events, the disease is neither prevented or eradicated by any means now in use—will they, therefore, permit one who is deeply interested in the result, to suggest a mode of treatment, by which it is believed the evil is to be met and overcome.

In late visits to several of the nurseries of peach trees, both in Delaware and New Jersey, I have observed with wonder and astonishment, the gigantic size to which the trees are forced by every means of human ingenuity, many acquiring the height of 8 feet and 3 inches in circumference, from the bud of last autumn. And if to this be added the first year's shoot from the seed—say 6 feet, which is amputated in the spring, we have the enormous growth of 14 feet from the seed, in a year and a half! Now I would ask, does not this extravagant drainage from the root, or whence so ever it may be supposed to proceed, produce a laxity, and a disorganization of the sap-vessels, sufficient to engender disease in the plant, which might then be compared to an overgrown youth? If so, putricity must follow, and then blight, in the shape of *life*—the worm; and the yellows, of necessity and according to the law of nature. And is it not a fact, that the trees now raised by our nurserymen, are twice as large in their growth as formerly; and do not these men pride themselves in the art of producing them of enormous size, purchasers also, generally preferring those that are so? I lately saw trees from the nursery of a person at Moorestown, N. J., measuring more than 8 feet in height, an inch and a half in diameter, with roots sufficient in growth for trees of ten years old, one year only from the bud! Now, of what advantage is all this? None whatever, but a decided injury; productive, it is believed, of the very evil so much complained of. I know that some persons do not covet these large trees, preferring those of a smaller size; but if these are taken from the same nursery, they are, then, those that have sprung from small and weak seed, or been overgrown by larger plants, and are to be rejected, for the same reason that small apples, from among those of larger growth on the same tree, are always inferior, being generally diseased, or immature; so the evil is by no means avoided, or rather it is augmented.

At Manyunk, on the Schuylkill, I saw, some time since, a small nursery of peach trees, situated on an eminence; the soil thin, and resting on a bed of disintegrated rock, but dry and healthy. Here I found the trees about four feet in height from the bud, close and vigorous in their form, with no rampant leader; the wood, hard, well ripened, and of a deep red color. The owner observed, his trees were sought after at double price, for besides being of the best sorts and true to their kind, they were sure to grow, when transplanted; their roots being small and compactly formed around the body of the tree; besides this, they are free from disease, and would remain so, pointing to the well-ripened wood, and the compact growth of the tree, as indicative of health and vigor of constitution. The following course of treatment is, therefore, with much confidence, recommended for adoption.

First, raise the trees on a healthy and elevated spot, without the aid of manure or extra culture with the view of forcing their growth; shortening all large and vigorous shoots that may be thrown out, even during their first and second season. The operation of budding is too well understood, to require either note or comment. At the time of planting out, let the branches, leaders as well as side shoots, be headed down to within three inches of the body of the three, removing the tap root, and others of overgrown size; taking care that the southerly aspect, which it bore in the nursery, is given to it in its new location. And from this period, let a rigid system of pruning be adopted, without fear of evil consequences. No tree bears the knife so well as the peach; and to its regular and systematic use, is a cure of its diseases to be looked for. Let, therefore, every overgrowing branch be shortened, keeping the head of the tree of regular dimensions. It is seldom, indeed, that we see a peach tree that is not top-heavy; yet the order of pruning must be the reverse of that practiced on the apple tree, where it is customary to thin out the middle branches, for in the peach, the bearing wood should be there retained, as also on the sides of the larger branches; by these means, much breakage would be prevented, and thousands of the finest trees be saved from destruction—it is the healthiest trees which fall, crushed by the weight of fruit hanging at the ends of long branches; not those affected by the yellows.

The perpetual cultivation of the peach-orchard was resorted to, for the purpose of preventing the evils complained of, but would those who have practiced it the most vigorously say, if in any instance it has been found effectual? To those who still advocate such a course, as necessary to the well-being of the trees, the production of fine fruit, the eradication of the weeds, the destruction of the worm, and the prevention of the yellows, the following facts, fully to be relied upon, speak volumes.

Major Reybold, of Delaware, has an old peach orchard of about three acres, that has not been cultivated for five or six years, having been used as a hospital for sick sheep; yet from thence, for several years past, the finest fruit sent to market has been picked. While speaking of the orchard, the Major said, a few years since I had peaches here, when my friends had none; my family ate $300 worth, after which I sold the remainder for $2,700.

Mr. Caleb Brinton, of Pequea, Lancaster county, Pa., has an orchard, one half of which has been kept under constant culture, the other half being meadow. While searching for worms the past season, full 20 for 1 were found on the cultivated half; the trees sickly and dying of the yellows.

Mr. Mahlon Kirkbride, of Morrisville, Pa., writes, by constant culture and laying lime to the roots of the trees, he has been able to keep the worms at bay; but, spite of all his care and attention, the yellows have carried them all off, and he has not now a peach tree on his whole estate.

But none of these gentlemen have tried the effect of a thorough system of pruning, commencing with trees in health, youth and vigor, and that had not been prematurely forced in the nursery—a system which is advocated as likely to be far more important than the most careful cultivation, and all other "appliances and means to boot." If at any time, it be thought advisable to refresh the trees, this can be done by top-dressing, far more beneficially than by the plow, the use of which, in the estimation of those who adopt it, "gives fresh vigor to the growth of the tree"—the very thing to be deprecated. The peach orchard then, will become a sheep-walk or a hog-pasture, affording a profit instead of a loss, in seasons when fruit fails: the sheep performing the labor of pruning the lower branches of the trees, on which the fruit is always inferior, and keeping down the weeds far more effectually than can be done by the plow; while the hogs will do all the *cultivation* that is necessary, and clear away the diseased and fallen fruit; all stock being removed before the time of ripening. I lately observed on the farm of Mr. Bryan Jackson, of Newcastle county, Del., that a portion of the peach orchard had been thrown into the hog-pasture; here the trees were most vigorous; and under each, the tramping of the hogs had done, in the way of cultivation, as much as was deemed necessary. The trees are four or five years old; and I was glad to find that the intelligent owner intends at once to lay down the whole orchard to permanent pasture, for the purpose of grazing sheep and swine. J. C. D.

Salem, New Jersey, 12th Nov. 1844.

. A VARIETY.

Luther Tucker, Esq.—I obtain something from almost every number of your paper that is of value to me, and in return, could I state a few things that would be serviceable to some of your readers, I should esteem the reward ample for the trouble of writing.

To stop the Scours in Sheep or Lambs.—Give them a small quantity of salt pork: if administered soon after they are attacked, two or three doses will generaly effect a cure. I have given it to neat cattle for the same complaint and with good effect.

To prevent Colts chewing their Halters.—Take the scab from the wart or issue on the inside of the leg, rub the halter thoroughly with that, and they will not be caught chewing their halter very soon. I have tried pepper, tobacco, &c., but nothing to so good purpose as their own or kindred musk.

To Destroy Ants and Prevent their building their Mounds upon Meadows.—I take a bog-hoe just as the ground is about to freeze in the fall, cut the mound off even with the ground, then sprinkle on the spot where the mound stood, about a shovel full of unleached ashes. The ants having burrowed a little below the surface, the lye of the ashes causes their utter destruction. The part taken off should then be removed from the meadow to the compost heap, or placed in some ditch or hole for the purpose of making the meadow smooth and level.

Coalpit dust I think has proved beneficial to my Fruit Trees, by placing a few shovels full about the roots of each tree; it keeps away the grass, prevents the borer from entering the bark, and withal makes an excellent manure. I am trying an experiment with coal-pit dust about some young apple-trees this winter, to see what effect it will have in keeping the meadow mice from them, which are very plenty here, and often prove destructive to young trees, during our long winters of deep snow. Last winter I placed ashes about the roots and body of the young trees; they were not injured by the mice, but I found I had made so free use of the ashes as to injure the bark of the trees in a number of cases.

The Cause of Rot in the Potato.—Accounts of the disease of the potato differ in different sections of the country; some attribute the difficulty to wet heavy soils—some to soils light and porous—others to much wet, and the extreme heat of the season. The month of September in this vicinity, was both warm and dry. The farmers here think their potatoes came off best on clay and heavy soils—many that harvested early and put them in their cellars were obliged to carry them out. I think those left in the ground late, generally proved best, the weather being more favorable than usual for such experiments, though early digging did not prove fatal in all cases. I dug about 50 bushels and put in the cellar on the 19th Sept. They were the Leopards, grown on a heavy sand and clay soil; there was not a dozen infected ones in the whole. I put them in an airy cellar; they kept well. About the same time I was passing a farmer who was harvesting his potatoes in a neighboring town. I stopped and went into his field. I found him digging on a beautiful fine sandy soil. They were a mixture of Leopard and Kidney potatoes, and about half destroyed by the rot. There were many hills that had not a sound potato in them. About two miles from this place in the same town, I found a farmer harvesting potatoes on a limestone ridge. He told me he had not found a single rotten potato. His were the Leopards. About the 10th of Oct. I dug the remainder of my Leopards. They came out about the same as those first dug. I then began digging my Mercers; here I found more diseased potatoes: about one bushel in thirty were lost. They grew upon a ridge; the soil a dry gravel. The disease in this case I am sure could not be occasioned by too much wet, for there had not been sufficient rain here from the 1st of August to the 29th of September, to half wet a potatoe hill, had it all fallen at one time. They appear to be keeping well in the cellar. I found some that were diseased, that had become dry and somewhat resembling starch. From what information I can gather, and from what I have seen, there remains much mystery with me as to the cause of the disease. J. N. Smith.

Chimney Point, Vt., Dec. 1, 1844.

CORN-STALK SUGAR.

In our May number of the volume for 1841, we gave a communication on this subject from Mr. John Beal, of New Harmony, Indiana. It appears that Mr. B. has been still more successful the present year than he was last. We are informed that he has made three hundred and ninety-five pounds of good sugar this season, from the corn stalks which grew on three quarters of an acre, which is at the rate of five hundred pounds per acre. His plan is said to be as follows:—"When the ears begin to form they are pulled off. When the leaves are dead about half way up, the stalk is stripped of leaves, cut up at the root, the top cut off, and then ground in a sugar mill. Twenty stalks will yield about one pound and a half, and of this three-fourths is grained sugar. Mr. B. made eighty pounds in a day, with a simple apparatus of his own construction. Five hundred pounds, at four cents per pound, is twenty dollars per acre. It would have produced, say 50 bushels of corn, at 25 cents, or $12.50.

Thrifty and Unthrifty Farmers.—The grand difference between a thriving farmer, and one who does not thrive, is, the one looks out for the *fractions*, the other does not. In farming, nothing should be lost; nothing should be neglected; every thing should be done at the proper time; every thing should be put in its proper place; every thing should be performed by its proper implement. When these rules are observed, the farmer will surely prosper—though his gains may be slow, they will be certain and sure.—*Proctor's Address.*

See, WINTER comes, to rule the varied year,
Sullen and sad, with all his rising train;
Vapors, and clouds, and storms. Be these my theme.
These! that exalt the soul to solemn thought,
And heavenly musing.

SEED AND IMPLEMENT STORE,

At Rome, Oneida Co., N. Y.

COMSTOCK & JOHNSON, proprietors of the above store, will be happy to receive orders for seeds of any kind, and also for all the most approved implements used by farmers.

January, 1845—tf

FOR SALE.

THE subscriber offers for sale his fine Durham bull Osceola. He is now two years and a half old, and has taken the 1st premium at two successive State Fairs; for pedigree and further description, see Cultivator, Sept. 1813.

Also, his thorough bred Stallion Young Florizel.

Watervliet, Dec. 16, 1844—tf. CLARKSON F. CROSBY.

PLOWS

OF the most approved patterns now used in this State, will be constantly kept for sale either at wholesale or retail at the Rome Plow Factory, corner of Dominick and Washington streets. The *Diamond Plow*, which received the State Society's first premium last fall, is made by us in good style. Farmers in want of Plows, Cultivators, Cradles, Scrapers, &c. are invited to call.

A liberal discount to those who buy for retailing.

Jan. 1845—tf BRAINARD, COMSTOCK & CO.

HUSSEY'S REAPING MACHINE.

THE subscriber has now brought his Reaping Machine to the highest state of improvement. The cutting of four harvests has proved the last improvements to be permanent and durable. The four horse machine is warranted to cut from 15 to 20 acres per day—price, $170. The light two horse machine is warranted to cut from 12 to 15 acres per day—price $100 Medium size, price, $110. Farmers who intend getting machines to cut their next harvest, will please send their orders soon. References are given in the Dec. number of the Cultivator, 1844. Also for sale, my corn and cob crusher, an improved article; price 25 dollars.

Baltimore, Nov. 1844—4t* OBED HUSSEY.

SPLENDID FARM AND COUNTRY SEAT FOR SALE.

I NOW offer for sale my farm, consisting of 170 acres of the richest of the Mohawk Flats, all under improvement and in a highly productive state, together with the substantial and superbly finished brick mansion erected by the late Gen. John G. Weaver, at an expense of about $10,000. It is one and three-quarter miles from the city of Utica, on the north bank of the Mohawk, over a McAdam road. It has a beautiful orchard, garden, farm-house, barns, stables, sheds, &c., and is finely watered, and now stocked with choice Durham and grade cattle, Bakewell and Southdown Sheep, and all necessary farm implements; all of which will be sold at a great bargain to the purchaser. D. SKINNER.

Utica, January 1, 1845—3t*

AGRICULTURAL MACHINERY, &c.

MANUFACTURED BY R. SINCLAIR JR. & Co.

Baltimore.

CORN Mills,* $30 to $40.

Baldwin's Corn and Cob Crusher,‡ $65.

Sinclair & Co's ditto, particularly adapted for plantation use, with one set extra plates, $30.

Goldsborough's Corn Sheller and Shucking Machine, for horse power. A powerful and efficient machine, $40.

Threshing Machines and Horse Powers, warranted strong and durable.

Cylindrical Straw Cutters, 4 sizes, for hand and horse power, price $25, 30, 45 and $75.

25 sorts Plows, embracing the *Wheel*, Self-sharpening, Subsoil, and various preferred kinds.

Also, a general assortment of FARMING MACHINERY AND TOOLS. GARDEN and FARMING Seeds, Books, Ornamental and Fruit Trees, Shrubs and Plants.

Catalogues of the above will be furnished to applicants, giving descriptions, prices, &c. of all the above, and other articles not enumerated. R. S. Jr. & Co.

* See cut and description at page 17 of this paper.

‡ A cut of this will appear in the next number of the Cultivator.

FINE FARMS FOR SALE AT AUCTION.

THE property known as the Stimson Farm, situated at Galway in the county of Saratoga and State of New-York, will be sold at auction, at the Court House in Ballston Spa, on Wednesday the second day of April next, at 12 o'clock noon. It contains in the whole about 325 acres and is so divided as to make three farms, each having on it the necessary farming buildings. The roads from Schenectady to the Fish House, and from Saratoga and Ballston to Johnstown, run through the property at right angles, dividing it into four parts. The two pieces lying north of the road, said to contain about 190 acres, will be sold together. On this part are, a large hotel, capable of accommodating one hundred boarders, with the most extensive and convenient buildings for agricultural purposes. It is a favorite place of resort for families in the summer season. This part of the property will be a most desirable investment for any person desiring to connect the business of farming with that of keeping a hotel of this description.

The south-eastern portion, said to contain about 90 acres, has a farm house and the necessary out buildings, with a wagon maker's and a blacksmith's shop. The south-western portion, said to contain about 50 acres, has on it a store and dwelling-house attached, farm house and barns, and is a most desirable property for any person wishing a small farm. Each farm has on it the proper proportion of woodland, and the whole is of the best quality for farming, there being no waste land, and in the highest state of cultivation. The situation is high, commanding a most beautiful and extensive prospect in all directions.

The sale will be positive and without reserve, to the highest bidder, and perfect titles will be given. The terms will be 5 per cent cash, to be paid to the auctioneer at the time of sale; 50 per cent may remain on bond and mortgage for five years, or a longer term, at 6 per cent interest, payable half yearly in the city of New-York, on the first of May and November, and the balance to be paid in cash on the delivery of the deeds. For further particulars, apply to JOHN W. THOMPSON, Esq., Ballston Spa, or to J. OAKLEY, No. 77 Nassau-street, New-York.

Dated New-York, Dec. 9, 1844—3t.

FARM IN ILLINOIS.

FOR SALE—A good farm, with valuable improvements. The subscriber being about changing his business, will sell a great bargain. Also has in immediate vicinity, 2,000 acres choice land, which he will sell at a discount from government price. Address ISAAC HINCKLEY, P. M., Audubon, Montgomery Co., Illinois.

Dec. 1, 1844—tf.

THE CULTIVATOR,

NEW SERIES, VOL. II, FOR 1845.

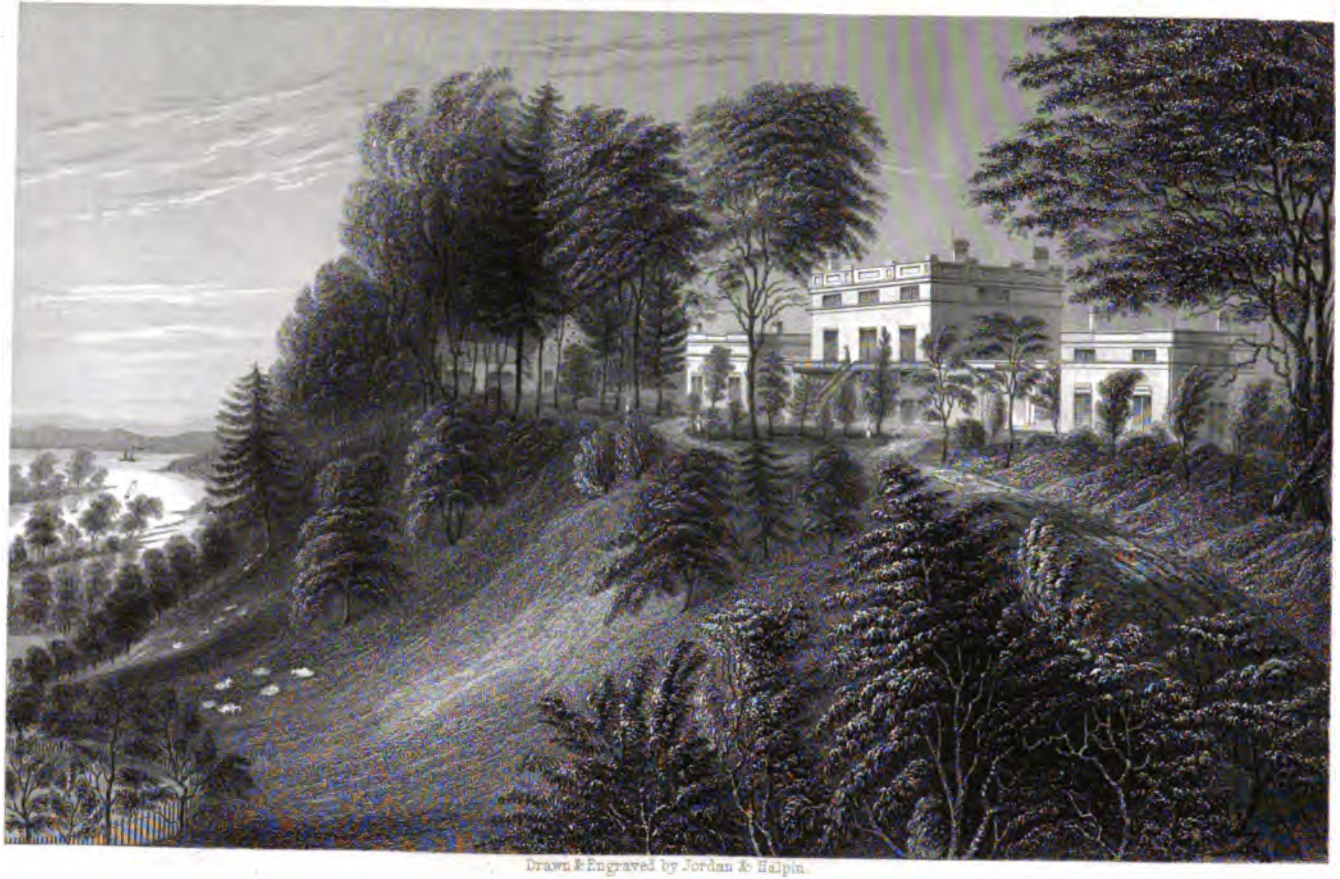
GRATEFUL for the liberal patronage his paper continues to receive in every section of the United States, the proprietor has determined to add a new and attractive feature to the volume for 1815, by giving two or more beautiful STEEL PLATES, engraved in the first style of the art. Various other improvements are also contemplated, which, with the constantly increasing list of correspondents, will, he trusts, render "THE CULTIVATOR" a most welcome visitor with every farmer and horticulturist.

Each number of the Cultivator contains 32 large octavo pages, and is published at the low price of $1.00 a year—Seven copies for $5—Fifteen copies for $10.

"We do no more," says Rev. Dr. Bond, editor of the Christian Advocate and Journal, "than strict justice when we say we believe the Cultivator is considered the best work of its class in the United States, and we have seen nothing equal to it from Europe."—"THE CULTIVATOR is," says the Auburn Journal, "by all comparison the best agricultural paper in the Union."—"We speak advisedly," says the Northern Advocate, "when we give *The Cultivator* the pre-eminence in point of maturity of agricultural knowledge, in every thing which appertains to the farmer or the farming interest."

☞ Any person wishing to obtain the Cultivator, can do so by handing a dollar to his Postmaster, who is authorized to forward it, free of postage, to the proprietor.

All orders must be accompanied with the cash, and be addressed to LUTHER TUCKER, Ed. Cultivator, Albany, N. Y.



Drawn & Engraved by Jordan & Halpin.

MOUNT HOPE.

The Residence of E. P. Prentice, Esq.^r near Albany.

Engraved for the "Cultivator."

Printed by John E. Gavit & Co. Albany

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES.

VOL. II. ALBANY, FEBRUARY, 1845. No. 2.

THE CULTIVATOR

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LUTHER TUCKER, EDITOR AND PROPRIETOR.

ONE DOLLAR A YEAR

SEVEN copies for $5,00—FIFTEEN copies for $10,00—all payments to be made in advance, and free of postage.

☞ Complete sets of the *First Series* of "THE CULTIVATOR," consisting of ten vols., quarto, are for sale at the office, and may be ordered through the Agents of the paper throughout the country. Price, stitched,—vols. 1, 2, 3 and 4, 50 cents each—vols. 5, 6, 7, 8, 9 and 10, $1,00 each—for the whole set, $8,00.

OFFICE IN NEW-YORK CITY, AT

M. H. NEWMAN'S BOOKSTORE, No. 199 BROADWAY,

where single numbers, or complete sets of the back volumes, can always be obtained.

THE CULTIVATOR.

MONTHLY NOTICES.

☞ We have the pleasure of acknowledging the receipt of over *eight thousand* subscribers during the past month, exceeding the receipts, during the same time, last year, more than 2,500. For this handsome increase we are indebted mainly to the disinterested labors of those who have voluntarily, and in most cases gratuitously, so far acted as agents as to get up classes in their towns at the reduced rates at which the paper is furnished to Agents. Truly grateful as we are for these continued manifestations of approbation from the friends of agriculture, it will be our great object to render our paper more and more worthy the favor with which it is so liberally received.

COMMUNICATIONS have been received since our last, from John F. Dauphey, J. P., James Hall, Ellwanger & Barry, D. G. Mitchell, L. B. Langworthy, T. H. Hyatt, W. H. Whiting, L. W. Washington, E. V. W. Dox, S. Tillotson, S. D. Martin, G. L. Beckith, A Wiltse, L. F. Allen, Rambler, Wm. Summer, E. Comstock, P., M. P., C., E. N. Horsford, S. W. Jewett, R. L. Pell, J. M. Harlan, L. Durand, E. Hammond, E. R., C. Butler, Alex. McDonald, H. Hull, L. Smith.

☞ Dr. MARTIN'S excellent paper, for which he will please accept our thanks, will be given in our next—as also many other favors of correspondents, which are omitted this month for want of room.

Our thanks are due to Col. A. PETRIE, for his Address at the late Fair of the Herkimer County Ag. Society—to some unknown friend for the Address of F. J. BETTS, Esq. of Newburgh, before the Berkshire Ag. Society—to Hon. H. L. ELLSWORTH, Washington, for Prof. MORSE'S Letter to the Secretary of the Treasury on the subject of the Magnetic Telegraph—to A. FITCH, Sec. Washington Co. Ag. Society, for an admirable Report of the Transactions of that Society—to W. R. PRINCE & Co. Flushing, for their new "Descriptive Catalogue of Fruit and Ornamental Trees, Plants," &c., an interesting octavo pamphlet of over 100 pages.

D. T., Schenectady—By reference to the article again, you will see that the place, 'Boston,' is given.

H. S. W.—We do not know the price of Hay Presses. Will the makers of this article, give us their address, and the prices of their machines, that we may be enabled to answer inquiries on the subject.

W. M. wishes further information respecting the churn made in Saratoga, noticed in our last volume, p. 170. Will the inventor inform us where it is made, price, &c.

O. M. H.—The Skinless Oats have not, we believe, proved valuable in this country. A discount of 33 per cent will be made on the vols. mentioned. Thanks for your favor.

☞ Our friend at Bridgeport, Ct., who inquired for a remedy for scab in sheep, will find an article on this subject in the present number.

CAPONS.—"S." will find answers to his questions, at p. 197, vol. 9, and p. 67, vol. 10, of the first series of the Cultivator.

E. F. C., Providence—The 2 bbls. shall be secured for you. Thanks for your efforts.

SEEDLING GRAPE.—We have had several applications for cuttings of the seedling grape, noticed in our Dec. number, as in the possession of G. B. Emerson, Esq. of Boston, which, we are sorry to say it is not in our power to comply with, as we are not aware that any can be procured short of Boston.

APPLES.—We have received from ELLWANGER & BARRY, nurserymen, Rochester, specimens of the "*Northern Spy*" and other apples, described by them in this paper. The Northern Spy is probably the most valuable variety added to our list of apples for some years. Trees or grafts may be obtained of Messrs. Ellwanger & Barry, Rochester, N. Y.—We have also samples from S. W. JEWETT, Esq., Weybridge, Vt., of a seedling apple called "*Jewett's Best*,"—of medium size, fine flavored, nearly red, and covered with light specks—also, from S. B. CUSHING, Esq. Ithaca, specimens of the "King Apple."

CIDER.—We acknowledge the receipt of a sample of cider from H. & Geo. H. Rundle, of Greenvile, Greene county, N. Y. It is of excellent quality, almost equal to champaigne. Mr. Rundle made the last season, eleven hundred and fifty-three barrels. We are to receive his mode of manufacture for publication.

MAPLE SUGAR.—We have received from our old friend MOSES EAMES, Esq. of Rutland, N. Y., a beautiful sample of maple sugar, for which we return our thanks. The article is pronounced by all, fully equal to the best loaf sugar.

MR. COLMAN'S TOUR, Part III.—We learn from Mr. COLMAN, that he has completed his Survey of England, and is now busily employed in preparing the 3d Part of his Tour for the press. It will contain a chapter on Guano and other manures, and will be issued in March. This chapter will be of great interest at the present time, when so much inquiry is awakened on the subject of Guano in this country, and the facts and experiments detailed by Mr. C. will enable our farmers to judge as to the propriety of its use here.

QUERY.—A friend desires us to insert the following. How would the following composition answer for a coating for buildings, fences, &c.? Water-lime, three-parts, sand and ashes, one part; to be mixed with water in which oil-cakes have been dissolved.

AGRICULTURAL PAPERS.

The Connecticut Farmer.—This paper, hitherto published at New-Haven, has been discontinued, and its proprietor has made arrangements with us to supply such of his subscribers as had paid him in advance, with the Cultivator, for the balance due them. This paper will accordingly be sent to them until the expiration of the time for which they had paid, when it will be discontinued, as we take no subscribers without payment in advance. Mr. J. M. Patton, the former publisher of the Conn. Farmer, will act as Agent for the Cultivator at New-Haven, and will be glad to receive subscriptions of such of his former subscribers, as may wish to become subscribers to the Cultivator.

New Genesee Farmer.—This paper commences its sixth volume under a new arrangement. B. F. Smith & Co., are still proprietors, and Dr. D. Lee, of Buffalo, well known as one of the ablest of the agricultural writers of the day, is editor. There is a horticultural department, conducted by P. Barry. The form is octavo, of sixteen pages each number. It is hereafter to be called the Genesee Farmer. Terms, fifty cents a year in advance.

The Albion, *or British Colonial and Foreign Weekly Gazette.*—This paper commences the year with an Agricultural Department under the charge of that founder of agricultural papers in America, John S. Skinner, Esq. Under the direction of this veteran in agricultural literature, we cannot doubt that the new department will greatly increase the interest and value of this paper. The number for Jan. 4th, has several excellent articles under the agricultural head.

New-York Farmer & Mechanic.—This paper is hereafter to be printed in the newspaper form, and is designed to be a "family and business paper, devoted to Agriculture, Mechanics, Manufactures, News, Education, Temperance and Religion." It will contain authentic reports of the New-York Farmer's Club, the Conversational Meetings of the American Institute, the Proceedings of the Mechanics' Institute, &c.—Published by Fleet & Starr, 135 Nassau-street, New-York, at $2 per annum in advance.

Southern Cultivator.—This monthly paper, published at Augusta, Georgia, (at $1 per annum,) has just entered on its third volume. An arrangement has been made with James Camak, Esq., of Athens, to conduct the editorial department. The name of this gentleman will at once be recognized by our readers, as associated with several excellent articles which have at various times appeared in our own Cultivator. We trust he will find the new field he has chosen, in all respects an agreeable one, and that the paper which is placed under his charge, will receive the liberal patronage which it will undoubtedly merit.

The Boston Cultitator begins the year with quite an ornamental new dress. Besides being a *pretty* paper, it is a *good* one.

British American Cultivator.—This publication comes out with the new year in the octavo form. It is published at Toronto, Canada West, monthly, at one dollar a year. It is a useful paper, and we recommend it to the patronage of the Canadian public.

American Rail-Road Journal.—The thirteenth volume of this valuable publication has just closed. The great increase of rail-roads within a few years, has rendered such a journal highly interesting. It is stated that since the publication of this work commenced, the rail-road system has grown from less than *one hundred miles,* either in this country or Europe, to several *thousands* in *each* country. The work is hereafter to be published weekly in a quarto form of sixteen pages, at $3 per annum. D. K. Minor, editor. Office, 23 Chambers-st., New-York.

Rapid growth of a Pig.—According to the Maine Farmer, Ephraim Wood of Winthrop, lately killed a pig which weighed 357 pounds at only the age of 8 months and 15 days. This is nearly a gain of a pound and a half a day from the time of its birth to its death.

ENCOURAGEMENT OF AGRICULTURE IN CUBA.

From an advertisement which we find in the London papers, signed by the Spanish Consul-General in Great Britain, we learn that the Royal Board for the Encouragement of Agriculture in the Island of Cuba, have offered, among others, the following liberal premiums. They are well worthy the attention of our enterprising countrymen, whom we can hardly doubt will obtain their share of the honors and emoluments to be derived from the highly praiseworthy and patriotic efforts of the government and people of Cuba for the improvement of agriculture. The officers whose names are attached to this document, desire to notify all persons who wish to compete for these premiums that they may do so with the perfect assurance that they will be punctually paid.

One thousand dollars to the person who, during the month of December, 1845, shall soonest prepare, and put into the most perfect state of tillage, one "cababelleria of land, with the improved American plow, worked by mules, and managed by whites." *One thousand dollars* to the person who shall, on the first of December 1846, show two "cabellerias" of land well stocked with red clover of six months growth. *Twenty thousand dollars,* in annual instalments of $2,000, to the first person who, during the years 1845, '46 and '47, shall set up or establish a sugar estate or plantation, in which the cultivation of the cane shall be performed by thirty white families, consisting of a married couple each at least. *One thousand dollars* for the introduction of the bean used in the sugar estates of New-Orleans, as an article of food. *Four thousand dollars* to the person who shall show on the first of December, 1848, an artificial plantation of trees, of three years growth. *Six thousand dollars* to the person who shall introduce from the East Indies, 200 thriving and luxuriant stocks of sugar canes, &c. *Twelve thousand dollars,* in annual instalments of $2,000 to the person or persons who shall set up, during the years 1845 and '46, a permanent establishment for the improvement of the breed of horses—four stallions, viz: one of each of the following breeds, to be kept for public service, at prices to be fixed by the owner—one Andalusian, one Arab, one Norman, and one English—each to be of the genuine breed, of good form, size, &c. *Six thousand dollars,* in annual instalments of $1,000, to the person who shall import direct from England, one bull and six cows "of the finest and most reputed breed of that country." *Two thousand dollars* to the person who, on the first of December, 1846, shall show a herd of the "largest sized swine," introduced from the United States of America, or any other country. *One thousand hard dollars* to the person who shall, on the first of December, 1846, "present or produce, a breed of the largest domestic or barn-door fowls, (gallinas,) hatched or born on the Island, of a breed introduced from the United States of America, or any other country."

Great product of Whett.—Hon. E. Mack, in his address before the Tompkins county Ag. Society, states that Mr. E. J. Ayers, of Ulysses, raised the past season, *fifty-seven bushels of wheat* to the acre. He observes that several others, as he has been informed, have raised from forty to fifty bushels to the acre. "This equals," he remarks, "the improved yield in the best portions of England and Scotland, and shows what the soil of our country, with skillful management, is capable of producing."

Ribbon Houses.—We see in the Genesee Farmer, a description of a new mode of building houses. The sills are laid upon a wall. The boards or ribbons used for the superstructure are of hemlock, four inches wide and one inch thick, laid up in the manner of brick work, taking care to break joints. The partitions should be carried up and worked into the wall with the main body. The partitions are carried up to the roof and a plate dispensed with, though a ridge-pole is used. The boards are nailed with 8 penny nails, except four or five of the last courses which are nailed with 10 penny. The plastering of the inside is applied directly to the walls. It is said to make a very warm and cheap house, and the only alteration recommended from the plan here described, is to use boards an inch and a half, instead of an inch thick.

PLATE II.

MOUNT HOPE,

The Residence of E. P. PRENTICE, *Esq.*

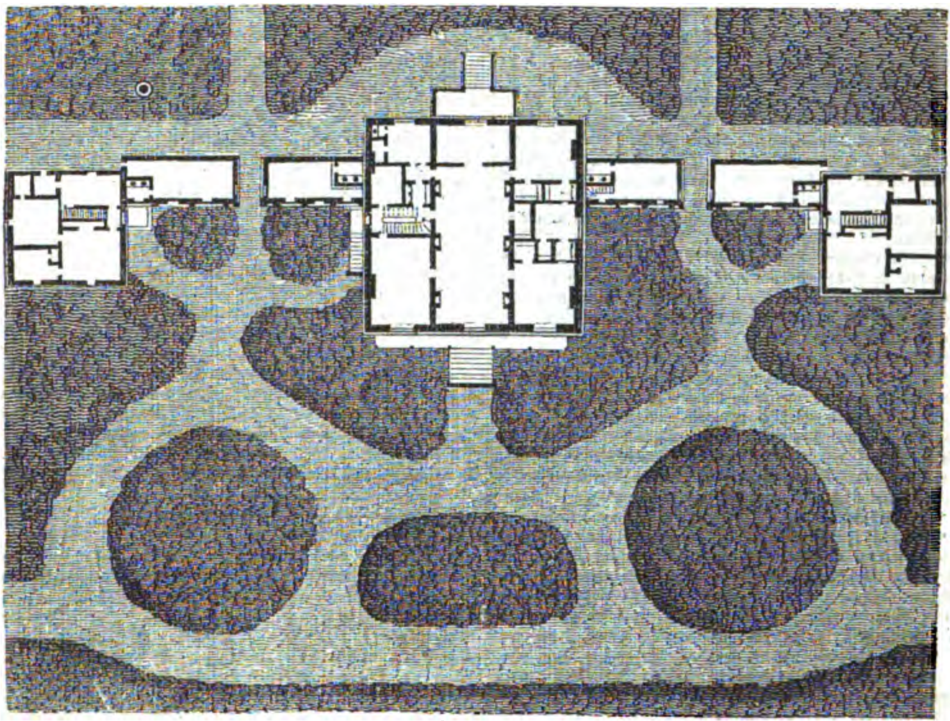
WE have the pleasure of presenting our readers this month, with a view of Mount Hope, the residence of E. P. PRENTICE, Esq., well known to the farmers of this State for his enterprising and successful efforts in the introduction of improved breeds of cattle—engraved on steel by JORDAN of New-York, from a drawing made expressly for The Cultivator.

Mount Hope is situated on the west bank of the river, about a mile below this city. It is a beautiful natural situation,—one of the finest indeed of the numerous beautiful situations on the Hudson,—much embellished by art, but not reduced to artificial stiffness. In front of the house is a fine lawn of ten or fifteen acres, descending from the house to the road, interspersed with trees, and flanked on either side by gently rising hills covered with scattered groups of trees and dense copses. In front, and about thirty rods below the house, is a fine elliptical sheet of water, 150 feet long by 100 wide, bordered by trees, and surrounded by a neat fence, and in the center of which a perpetual fountain, in the form of a fine delicate silvery jet, shoots upwards fifteen feet or more in height.

The view from the house is of uncommon beauty, and embraces the city on the left, and the Hudson for many miles below, until lost among the blue hills. The distant peaks of the mountains of Vermont and Massachusetts are distinctly visible. The surface of the river is constantly spotted, during the season, with white sails moving up and down its channel, and the scene enlivened by the occasional arrival and departure of steamboats, and of trains on the Boston rail-road, which is seen for many miles from this place.

On the right of the house is a well-arranged flower garden, and in the rear vegetable and fruit gardens, with a large and fine natural grove beyond on a greatly varied surface—the whole furnishing a most refreshing and lovely retreat from "the tumult and smoke of the city."

In the annexed figure, a view is presented of the first floor of the house, together with the adjoining grounds.



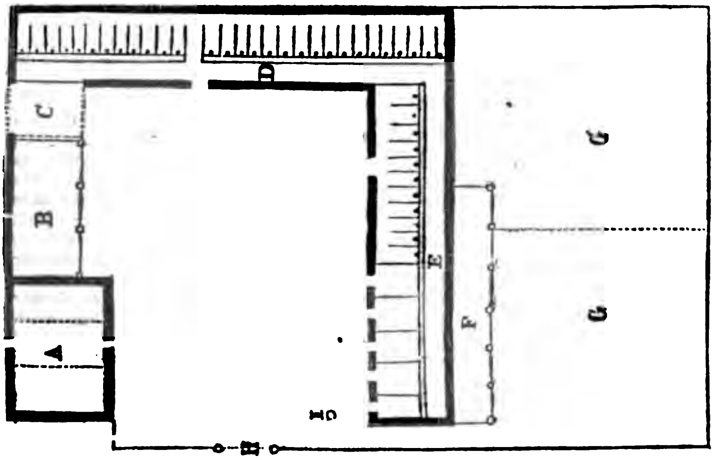
First Floor—Scale 48 *feet to the inch*—(Fig. 14.)

The farm at Mount Hope, consists of 127 acres, 25 of which are in wood. The whole of the cleared portion has been brought to a high state of fertility, as may be inferred from the fact that it maintains on an average over fifty head of neat cattle, (of various ages, from calves to full-grown animals,) six horses, and from fifteen to twenty swine. All this stock is actually supported from the farm. Grain or meal has sometimes been purchased, but the amount of hay, &c. sold, has been more than sufficient to balance this. In addition to supporting the stock, the farm and garden produce grain, vegetables and fruits, amply sufficient for home consumption.

The soil of the greater portion of the farm may be said to have been naturally of not more than medium quality, and its extraordinary fertility and productiveness have been caused by the application of manures. Besides the manure made from the stock of the farm, Mr. Prentice makes use of the animal matters, and other waste, from a large manufactory of various articles of fur. The waste from the factory is a very powerful manure, and being mixed with earth, the scrapings of the streets, &c. constitutes a valuable dressing for all crops. The barn yard is well calculated for preserving the manure, and the cattle are kept constantly well littered, either with straw, or fine shavings and dust made by a planing machine. The litter absorbs much of the urine, which would otherwise be wasted.

Fig. 15 exhibits the ground plan and the internal arrangement of Mr. Prentice's barns, and the apartments for stock, which it will be seen are convenient and judiciously contrived.

Among the attractive objects about Mount Hope, is the beautiful herd of Improved Short Horn cattle. Many individuals of this herd have at various times received the highest premiums of the New-York State Agricultural Society, and portraits of several of them have appeared in former volumes of the Cultivator. The first of Mr. Prentice's herd, were a pair, Leopard and Trim, purchased of the late Hon. Stephen Van Rensselaer in 1834. To these were added Susan, imported by Mr. G. W. Smith in 1832, Matilda, out of Heart, which was imported by Thomas Hollis, Esq., and the following animals import-



Plan of Barn, Yard, &c.—(Fig. 15.)

MR. PRENTICE'S BARN.

Explanation.

A. Barn 30 by 40 feet, with threshing floor.

B. Shed with hay loft, 21 by 40 feet.

C. Gateway with hay loft over it.

D. Passage 120 feet long, with 29 cattle stalls on the right, each stall with a post and sliding ring for fastening the halters.

E. Passage with stalls & rooms for calves, &c.

F. Shed for sheep.

G. G. Sheep yards with high close board fence.

H. Entrance gate, thro' picket fence 12 feet high for confining hens.

I. Pump.

ed mostly by Mr. Prentice, direct from England, viz: Appolonia* and Splendor, imported in 1838, 9—Princess, Miss Scotson, Flora, Aurora, and Snydus, in 1840—and Moss Rose, Violanta, Esterville and Catharine, in 1841. These were selected from the noted herds of the Earl of Derby, Samuel Scotson, Esq. of Toxteth Park, Messrs. Whitaker, and R. C. Lowndes. The animals above named, are all registered in the Herd Book, and they, with their progeny, constitute the present Short Horn stock at Mount Hope.

At the first Cattle Show of the N. Y. State Ag. Society at Syracuse in 1841, Mr. Prentice received the second premiums on bulls, cows, two year old heifers, and the first premiums for yearling heifers and bull calves. At the Show of the same Society at Albany, in 1842, the first premiums for the best bull, two year old bull, bull calf, and heifer calf, and second premiums for cows, yearling heifers, and heifer calves, were also awarded to Mr. P. At the last State Show, holden at Poughkeepsie, Mr. Prentice only exhibited from his herd three heifers, for two of which he received the highest premiums in the class. Of one of these heifers, "Esterville," we present our readers with a very accurate portrait at page 56 of this number.

This herd of cattle cannot be large consumers—after making due allowances for the fertility and production of the land, the quantity of stock kept is certainly remarkable. Though no particular trials have been made with any of the cows to ascertain the quantity of butter they would yield, it is known that several of them are extraordinary as milkers. *Appolonia* is one of the best dairy cows we have ever seen. She, and several others have each given from twenty-five to thirty quarts of milk per day, for several weeks in succession, with only grass feed.

In 1842, Mr. Colman gave the following account of Mr. Prentice's stock, in the New Genesee Farmer, of which paper he was at that time editor:

"If any man, however, chooses to see this stock in perfection, let him go to the farm of E. P. Prentice of Albany; and if he has any prejudices of any kind against the stock, and is not then prepared to yield every one of them, I can only say he is differently constituted from what I am. Mr. Prentice has about forty animals of the Improved Durham Short Horn, of pure blood and of the highest pedigree. He has one cow with seven heifers of her own progeny along side of her, six of which were in milk. A stock of larger size, of more symmetrical form, of equal beauty, of finer feel, of more thrift, of greater productiveness, I never have seen nor never expect to see; nor do I expect to see a herd better kept, nor better arrangements for their keeping. To an amateur, to an inquisitive farmer, who desires to see what skill, intelligence and care can effect in moulding and improving the animal frame, it is worth a journey from Rochester to Albany on foot to see this stock. It is worth almost as much to see Mr. Prentice's stable arrangements and the tidy manner in which every thing is kept. Some few farmers among my acquaintance, in going there, would hardly know that they were not in their own parlors."

Besides the Short Horn stock above mentioned, Mr. Prentice has a few very superior Ayrshires. These are a cow imported in 1842, and a heifer which she dropped on the passage, with one or two others produced since. They are beautiful animals, and have evidently superior qualities for the dairy.

The community is also indebted to Mr. Prentice for the importation of choice flocks of South Down and Cotswold sheep. These were imported in 1837. The South Downs were selected from the flocks of Messrs. Riga and Putland, Sussex, and the Cotswolds from the flock of Mr. Riga, Cross-hands, Wiltshire. Finding the breeding of sheep in connexion with cattle, rather inconvenient, Mr. P. disposed of the former to Mr. J. McD. McIntyre, in 1841.

IMPROVED PLOWS.

The improvements in agricultural implements of various kinds, within the last twenty or thirty years, has been very great. In the PLOW, particularly, there has been almost an entire revolution, both in the kind of material used, and in the general form and construction. A single example of the manner in which, within the memory of the writer, (thirty years,) the operation of plowing was performed in a New-England neighborhood, not by any means behind the age in agricultural advancement, will serve to show in a striking light, the improvement which has been effected in this most important implement of husbandry. In plowing "green-sward," the force commonly employed was three yoke of oxen, with a horse to lead, or two yoke of oxen and a pair of horses, with two drivers, one man at the plow-handles, another at the beam to "bear on" in hard places, and, if the ground was at all rough, a man to follow the plow with a stout hoe to mend "baulks," and turn over furrows. An acre was considered a good day's work. Now mark the contrast. On the same farms, the same fields, with a tougher sward, are now plowed with one yoke of oxen, (sometimes with the addition of a horse,) and often with only one man, who is both plowman and driver. An acre and a half is plowed in a day, in a style infinitely superior to the former mode. Besides, notwithstanding the superior excellence and durability of the new implement, its cost is at least one-fourth less than that of the old one.

This modern improvement in plows, it may be safely averred, originated in the encouragement offered by agricultural societies. The Massachusetts Society for the Promotion of Agriculture, early manifested a deep interest in this matter. The institution of plowing matches in this country, the credit of which belongs to this Society, it is believed gave the first decided impulse to improvement in this direction. Their first plowing match took place at Brighton in October 1817. The offer of premiums for the best plow, by this, and other associations, soon followed; and by the competition which was thus in various ways created, improvements were started and pushed on, till at the present time a degree of perfection has been reached in some of the best constructed plows, to which it seems almost impracticable to make any farther additions.

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* With Appolonia, there was shipped a beautiful and celebrated cow, called Wood-Nymph, which unfortunately died on the passage.

As Massachusetts took the lead in the institution of plowing-matches, and the offering of premiums for the best plows, a brief sketch of the progress of improvement in that State, will be read with interest.

At some of the first trials of plows under the direction of the State Ag. Society, at Brighton, those made by Jesse Warren, of Dedham, Charles Howard, of Hingham, and —— Hall of Sutton, attracted particular attention. The first premium at the first trial, (1817,) was awarded to Mr. Howard and his partner. At this trial, the once famous English *Beverstone* plow, was brought into competition with those of American manufacture, by the late JOHN PRINCE, Esq. of Roxbury. For several years, the plows used at these trials, were made of wood, ironed in the old mode. A cast iron mold-board, the share and other parts being made as before, was after a while adopted by Mr. Howard, and about the same time, some plows wholly of cast-iron were introduced.* The latter were Tice's and Wood's. Some cast iron plows were also imported from Scotland. But the iron plows were slow in coming into use. Those of the Tice and Wood patterns, were frequently used at the Brighton trials. They were admitted to run with less resistance than most of those made of wood, but from their extreme shortness, and the abrupt position of the mold-board, they did not turn a sod-furrow so well and handsomely as was desired, and on this account were not very successful in obtaining prizes. The castings were also bad—the plows broke a great deal, which created a prejudice against cast iron plows, not very easy to be overcome—and various circumstances combined to throw the Wood and Tice plows into disuse.

In the mean time the mechanical principles on which the plow should be constructed, engaged the attention of men of the strongest minds. The late Hon. TIMOTHY PICKERING, who, after his retirement from an important political post, the Secretaryship of State, to which he had been appointed by Washington, engaged in agricultural pursuits with great zeal, laid down the following rule for the construction of the mold-board:

"Having fixed a straight line, by one cut of a saw from the upper corner of the mold-board behind, to its point forward, cut away the wood above and below that line in such a manner that when finished, if you carry a straight rule from the fore to the hind part, keeping it all the way at right angles with the straight line, it shall touch the face of the mold-board, in its whole breadth, in straight lines, through its entire winding, so that its upper corner behind shall overhang the lower sufficiently to effect a complete turning of the furrow slice."

The above rule is in accordance with the principles advanced by Mr. Jefferson in his letter to Sir John Sinclair, and which have been and are still adhered to, in all modern improvements of the plow.

As the trials of plows by the Massachusetts Society, annually brought the various competitors together, a progressive improvement was every year observable. Mr. Warren, by study and practice, greatly improved the construction of his plow. It made beautiful work—many premiums were awarded to it at the Brighton plowing-matches, where for several years it was much esteemed. Mr. Warren finally got out patterns for iron plows, on the general principle of his wooden one. Some of these we have held with our own hands. They were good plows, though destined soon to be eclipsed by better ones.

Mr. HOWARD continued to add improvements to his plow, and was very successful in obtaining prizes. About the year 1825, Messrs. PROUTY and MEARS, with various patterns of the "Hitchcock" plow, became conspicuous among the successful competitors. The Hitchcock plow may be considered the basis on which has been engrafted the various improvements that in these days have rendered the plows of Messrs. P. and M. famous over the whole country.

Other competitors also appeared in the field. Prominent among these, were Messrs. RUGGLES, NOURSE and MASON, who were not long in securing a share of the honors to be gained in the contest. For several years past, it may be said that the competition in Massachusetts, has been between the plows of the three last named firms—that is, between those of Howard, Prouty & Mears, and Ruggles, Nourse & Mason.

Each of these concerns manufacture a large number of plows of various patterns, and there are large ware-houses in Boston, where all of them, as well as other implements, are extensively sold. We have before spoken of the establishment of Messrs. BRECK & Co., (where Howard's plows are sold,) and that of Messrs. RUGGLES, NOURSE & MASON. In our visit to Massachusetts in October last, we visited the warehouse and manufactory of Messrs. D. PROUTY & Co., successors to Prouty & Mears. Their store is in Boston, and their manufactory in South Boston. The latter is a very large establishment. The building is 120 feet long, 36 feet wide, and four stories high. They manufacture plows of various patterns, though they are mostly on what is called the "centre-draft" principle—that is, the beam is placed over the center of the weight of the plow. These plows have acquired an extensive reputation, and orders are constantly received for them from all parts of the Union.

Messrs. P. & Co. also make many subsoil plows of different kinds—also harrows of very superior construction—sowing, or planting machines—straw-cutters, and most other farming implements. Every tool is made of the best material, and in the most finished style of workmanship. All their operations seem to be conducted with much system, and great regularity and neatness are observed throughout.

CORN-STALK SUGAR AND MOLASSES.

MR. WILLIAM H. DEADERICK, of Athens, Tennessee, gives a communication in the Tenn. Agriculturist, on the manufacture of corn-stalk sugar. Mr. Deaderick has made more or less of this article for the three last years. During the last season he made over 100 gallons, or one hogshead of sugar. By planting corn at various times, the molasses season, he observes, can be prolonged in that State from the middle of July to the middle of October. He directs that the mill for grinding the stalks, be made with three rollers, at least twenty inches in diameter, and twenty-six inches long, and four inches above the cogs. The cogs four inches wide, and eighteen inches below the cogs. The necks about three inches long, and six in diameter, with a smooth iron band fitted on to prevent their wearing. The stem of the middle roller, should be twelve or thirteen inches in diameter, and five or six feet long, the neck to be received in a corresponding hole in a transverse beam resting on two posts about twenty-five feet asunder. This arrangement will cause the mill to run more equally than if there was no support above. There should also be some contrivance of wedges and keys, with which to adjust the outside to the middle roller.

Mr. D. remarks, that for the sake of convenience, it may be proper to assign to the corn-stalk two stages in its growth, as the most suitable for making molasses and sugar: 1st. When just in roasting, or boiling ears. 2d. When it has passed out of the roasting-ear stage, and become too hard for cooking. The syrup made during the first or roasting-ear stage, if boiled moderately thick will very much resemble honey, both in appearance and taste. In the second stage, which Mr. Deaderick considers on the whole the proper one, or when the corn has become too hard for cooking, the syrup will more nearly resemble that made from the sugar-cane, and is the age of the stalk at which the syrup is most disposed to granulate. As the stalk ripens, the molasses will become darker and not so agreeable to the taste. In the roasting-ear stage, it requires ten gallons of juice to make one of syrup. In the second stage, or two weeks later, eight gallons will do the same. One gallon of syrup, boiled to the point of granulation—that is, when on taking a small portion (as warm as it can be borne) between the thumb and fore finger, it can be drawn into a thread an inch and a half long—is equivalent to ten pounds of brown sugar for any of the purposes for which that article is commonly used. Stalks from which the ears have been pulled in their embryo state, will afford one-fourth more syrup than those on which the ears have been permitted to arrive at their full growth. Large stalks are preferable to small ones, as it takes nearly as much time to strip and prepare for the mill the latter as the former.

The same difficulties have been experienced in regard to speedy granulation, as heretofore. It is evident that superabundant mucilage in the juice, retards the granulation of the syrup, but it is hoped more mature experience will remove this and all other obstacles to complete success. It is satisfactorily ascertained that if the syrup is properly made and placed in shallow vessels, in a moderately warm situation, it will granulate, if sufficient time be allowed it for that purpose. Last season a small portion was set aside, and five months elapsed before the chrystalization was completed, leaving, however, at last, little or no molasses. Mr. D. has several parcels which until August last have been slowly undergoing this process, some of which, he observes, are ready for drawing, and that doubtless the whole will be completed in a few weeks.

Mr. Deaderick thinks it all important that the juice be pressed out and set to boiling as speedily as possible after the stalks are cut; not more than two or three hours should elapse before this is done, for if the stalks are permitted to lie, or the juice to stand longer than the time mentioned, fermentation will commence and infallibly injure the quality of the molasses. As soon as a sufficient quantity of juice is received from the mill, it should be allowed to stand for a few minutes for the coarser particles to settle, and then be strained through a coarse cloth, and a table-spoon full and a half of clear lime-water added to each gallon of juice, and then poured into the kettle and carefully watched and skimmed during the whole process of boiling. Care must be taken that the iron vessels used are entirely free from rust.

Mr. D. states that the molasses thus produced has been pronounced over and again, by persons who have partaken of it, superior to the imported article; all, without exception, were fond of it, whilst among them were several who reject the use of cane molasses altogether.

Mr. Deaderick thinks the manufacture of corn-stalk sugar and molasses, is susceptible of being made a matter of the greatest importance—that which has been accomplished by a few, can be done by every farmer in the State—and that " it is as absurd and unnecessary for a farmer to purchase his sugar and molasses as it would be to import his soft soap, candles, or any other article of ordinary domestic production."

HOT BEDS.

Those who intend raising early vegetables, either for domestic use or for market, had better make some preparations for the business, this month. Cabbages, tomatoes, cucumbers, egg-plants, &c., may be had three or four weeks earlier, if started in a hot bed in early spring, and put out after the weather has become steadily warm. In making a hot-bed, mark out the ground the size of the frame to be used, and make an excavation to the depth of a foot, or if the ground is quite dry, eighteen inches; put in good horse manure to the thickness of two feet, and put on the frame and glasses. When the heat is sufficiently raised, put on six or eight inches of good mould; that made from clean grass-sods which have been piled and become entirely rotted the year before, is best; and when this is warmed to the proper degree, which can easily be told by applying the hand to it, plant the seeds. Care should be taken that there is not too much heat, especially when the sun shines. If there is too much, raise the glasses; and always let in as much air as practicable with keeping up the requisite degree of heat. Hot-bed plants require a great deal of water, which should be supplied from a watering-pot. If the weather should be so cold as to render it necessary, the bed should be protected by mats and straw.

Permanent hot-bed frames may be made of bricks. A false bottom is laid two or three feet from the ground, made of cast-iron, or iron bars, laid so closely together as to answer the purpose, on which is placed the earth for the plants. A door is left at one end of the brick-work, under the floor, to throw in manure, and another door at the opposite end, for taking the manure out. Thus a constant and regular supply of heat may be conveniently kept up, by only putting in fresh manure as the decomposition proceeds.

MODEL AND EXPERIMENTAL FARM.

Several newspapers have suggested that the Smithsonian Bequest, which, together with the interest up to the present time, it is said amounts to six hundred and ninety thousand dollars, should be appropriated to the establishment of a Model Farm. It appears that a bill was introduced by Senator Tappan, of Ohio, towards the close of the last session of Congress, for the purpose of effecting this object, and we are informed that petitions are now in circulation in various parts of the country for the passage of that bill.

The design of the benevolent donor, Mr. Smithson, in making this bequest, was the founding of an institution at Washington, for the " increase and diffusion of knowledge among men." One cause of the delay of our government in acting on this matter, has undoubtedly been the difficulty of fixing on a plan of an institution by which the original design of the donor might in the best manner be carried out. The very general terms in which that design is expressed, seem to admit of considerable latitude in the choice of a plan. The particular *kind* of " knowledge" which it was especially designed to " increase" and " diffuse," is not mentioned. It may, however, he safely claimed that the bestowment of the *greatest good* on the human family, was the grand aim and intent of Mr. Smithson in this disposition of his property. And how, we ask, can this philanthropic and praise-worthy object be better accomplished, than by the endowment of an institution for the " increase and diffusion of knowledge" in relation to that art which constitutes the very foundation of national independence, and individual support ?

We have not been so fortunate as to meet with a copy of Mr. Tappan's bill, but we understand that the proposed Model Farm is to consist of " ten acres of ground in the vicinity of the Capitol," the general direction and management to be vested in twelve citizens appointed by Congress. Students to be instructed in the institution gratuitously, &c. The trial of plants, and the distribution of such fruits, seeds and vegetables as shall be found useful and adapted to the various sections of the country, to be among the leading objects of the institution, while other means of usefulness will undoubtedly be improved.

It strikes us that the quantity of land, ten acres, is less than would be expedient, having in view all the objects to which such an institution should be devoted. It should be remembered that there are many important questions which it is desirable to settle by practical tests. In addition to the trial of plants, it is importaut to decide the relative value of manures, and their particular operation in promoting the growth of plants on various soils, and under different circumstances as to heat, moisture, &c.—the comparative expense of production and the value of different crops for feeding animals, whether for slaughter, for the dairy, or for labor. Careful and long-continued experiments are requisite, and should be carried on for the purpose of deciding these points. The most careful trials should also be made to ascertain as far as practicable, the comparative advantages of different breeds of domestic animals for special purposes, and their relative adaptation to different modes of feeding, &c. A sufficient quantity of land for successfully prosecuting all these and other necessary experiments, it seems to us should be secured in the outset; especially when it is considered that from the cheapness of land within a convenient distance of the proposed location, the addition of fifty or a hundred acres would make but a small item in the expense.

The subject of a Pattern or Model farm, in connexion with an Institution for the instruction of youth, in the State of New-York, has been at different times considerably agitated, and two or more bills granting charters for this purpose, have been passed by the Legislature, but different circumstances have combined to prevent any active measures being taken for the commencement of the enterprise. The difficulty of bringing into operation an institution, embracing in its plan and design *all* that it is desired to effect, has induced the suggestion that it is better, for the present, to attempt something on a less extended scale, but with a greater certainty of its practicability and accomplishment. We allude to the proposition of purchasing a farm for making experiments and deciding doubtful points in husbandry. The project need not involve an expensive outlay—the farm may consist of about fifty acres—and all that would be requisite to carry it on, after the first expense of putting it in order, would be the hands to perform the labor, and a competent superintendent to conduct the experiments and all operations, under the direction of a suitable board of officers.

The proper object of all inquiry, is the establishment of FACTS—such only being of practical utility—and by no other means within our knowledge, can this object be so well promoted, as by some plan like what is here proposed. It is certain that much good has already been effected by various laudable exertions which have been made in behalf of agriculture; but there are questions of the most important consideration—questions involving points on which the prosperity of the farmer actually depend, that have not been, and cannot be decided by any thing short of systematic and careful experiment. By the aid of an establishment like this, a series of experiments might be instituted that could be *relied* on—we need not be left to *guess* at the results, as is too often done in what are *called* experiments. The operation of different manures, and the application of substances for the prevention of diseases in plants, or to ward off the attacks of insects, would here be tested on the same soil and under precisely the same circumstances. Comparative trials would be made with plows and other implements. The superiority possessed by one breed of animals over another, if any really exists, would be demonstrated in the the actual *profits* given under an impartial and just experiment. Free from the bias of individual selfishness, or preconceived and favorite theories, the trials would be fairly conducted, and the results as fairly made known. The grand object being the acquirement of TRUTH, *Nature*, in every operation would be asked a question—her answer would be promptly noted and treasured up in the storehouse of knowledge for the future benefit of all.

For an object like this, we think there can scarcely be a doubt that the Legislature would grant the necessary appropriation. The trifling sum required would certainly be but a small return for the liberal aid which has been received from the agricultural class, in support of institutions from which they have derived but little comparative advantage.

HORTICULTURAL NOTICES.

ALPINE STRAWBERRIES.

C. M. Hovey, in a late number of his Magazine, speaks of the abundant supply of this variety of strawberry, in the markets of Paris, during the early part of *autumn*. He states the price at about 15 cents per basket; the basket containing a quart or more. We infer from his remarks that it is not well known in this country; its merits as a free grower and a great bearer, should make it more known. As with the Wood strawberry, there is a red and white sub-variety, which it also strongly resembles in the peculiar sweetness of the fruit, too much so to please some palates. It differs from the Wood in its more oblong fruit, and by its long continued season of bearing. It often yields but little during the heat of summer, but with proper culture, bears freely during a large part of autumn. We have seen good fruit picked in a rare case, on the sixth day of 12 month, (Dec.,) and a good dish of them on the table the first of the same month, in both cases from a garden in Western New-York. They often succeed best when partially shaded, as under a high fence, or fruit trees. Hovey says, "In the gardens of Luxembourg, we saw nearly quarter of an acre, planted out in rows, three feet apart, and a row of dahlias between every other row, the alternate spaces answering for walks. The dahlias afforded some shade, though it is less needed in the climate of Paris, and the vines [stalks] were loaded with fruit." From a long acquaintance with this variety, we venture to recommend their very general culture.

NEW ORNAMENTAL SHRUB.

A new and handsome shrub is noticed in the Botanical Register, a new species of Ceanothus, (*Ceanothus thyrsiflorus*,) "a perfectly hardy shrub [or small tree] with evergreen foliage of a beautiful glossy green, and dense panicles of bright blue flowers," from California. Though hardy in England, it might not be wholly so here. "The plant grows freely in any good soil, and is readily increased by cuttings [under glass ?] of the half ripe wood. Those who are familiar with our common native ceanothus, or *American white fringe tree*, can easily conceive the beauty which a large evergreen species with dense panicles of bright blue flowers would present.

GRAFTING CURRANTS.

The Gardener's Chronicle recommends, for the pretty appearance presented, as well as for improved flavor, to graft currants of different colors, as the red, black, and white, variously intermixed, on stocks trimmed up to a single stem three or four feet high. The tops may be headed down to a dense compact head, or trained as espaliers in the horizontal or fan method, the two latter modes of training, by the free exposure to sun and air, much improving the quality of the fruit. The importance of trimming the bushes up to a single stem to improve the fruit and facilitate clean culture, instead of suffering two hundred and fifty suckers to shoot up all round into a dense brush heap, is very obvious to those who have tried both.

BUDDING ROSES.

A correspondent of the Gardeners' Chronicle is very successful in budding roses, by "leaving a *small piece of wood*, as a protection to the bud when cut from the branch." This prevents drying before adhesion. He finds white worsted the best ligature, and the common Boursault a good stock.

BARREN AND PRODUCTIVE STRAWBERRIES.

The fact that many varieties of the strawberry, without being strictly diœcious, have, from imperfect fructification, distinct barren and productive plants, is more or less understood among cultivators. Some interesting facts, relative to this point, are given by S. S. Jackson of Ohio in a late number of Hovey's Magazine.

He says, "the first that I planted of Hovey's Seedling, I put no male [staminate] plants with them. They grew and blossomed very fine, and I thought I should have some mammoth fruit; but there was not a perfect berry on them, and very few imperfect. The next year I put male plants among them, and they bore beyond my expectation; and I now think Hovey's Seedling is the best market strawberry that we have; but they would not be worth growing here without the male plants among them. Last spring I had about one hundred Hovey's Seedling in a border, without any male plants near them. They flowered as fine as could be wished, but there was only three perfect fruit on them, and those three I impregnated."——"I do not think that an acre of ground, planted with Hovey's Seedling, Keene's Seedling, Hudson, and Elton, without male plants among them, would produce a bushel of fruit. I one year picked *thirty bushels* of the Hudson strawberry from *thirty square rods* of ground; they were about one-tenth male plants."

It is to the general knowledge of this property of the strawberry among the market gardeners of Cincinnati, according to the same writer, that they are there indebted for the perfection, abundance and cheapness of this fruit in the markets of that city. "It is," says he, "a knowledge and practice on this principle, that enables one of our market gardeners to bring *one hundred bushels a day to our market*."

DEPTH OF SOWING GRASS SEED.

No. 1, covered ¼ inch deep. KIND OF PLANT EXPERIMENTED ON.	Total of each kind.	No. 2, covered 0 to 3 inches deep. 0	¼ inch.	½ inch.	¾ inch.	1 inch.	1¼ inch.	1½ inch.	1¾ inch.	2 inch.	2¼ inch.	2½ inch.	2¾ inch.	3 inch.	Total of e[illegible]ind.
Lolium perenne, (perennial rye-grass,)	348	29	30	27	19	16	19	14	12	11	9	8	4		198
" *Italicum*, (Italian rye-grass,)	276	24	21	20	13	13	10	11	8	9	6	5	5		145
Dactylus glomerata, (Cock's-foot or Orchard,)	300	30	22	15	15	10	9	7	5	2					115
Festuca elatior, (Larger fescue,)	312	29	24	20	16	13	13	11	9	4	2	1			142
" *pratensis*, (Meadow do.,)	324	28	28	16	12	10	6	9	4	2	2				117
" *heterophyllas*, (Various leaved do.,)	348	31	23	20	18	12	9	6	4	1					124
" *diriuscula*, (Hard do.,)	360	30	23	10	15	10	8	5	3	1					114
Alopecurus pratensis, (Meadow fox-tail,)	192	17	17	16	15	12	7	6	3	1					94
Phleum pratense, (Timothy,)	528	52	39	37	19	16	15	7	5						190
Poa nemoralis, (Wood meadow grass,)	228	24	14	4	1										43
Plantago lanceolata (rib grass or plantain do.,)	252	22	25	19	17	14	11	10	8	6	2				134
Trifolium pratense, (Red Clover,)	192	17	16	14	11	11	8	4	4						85
" *repens*, (White Clover,)	144	13	11	6	4	3	1								38
Medicago lupulina, (Yellow Clover,)	96	12	10	8	6	4	2								42
	3,900	358	303	241	181	144	118	90	65	37	21	14	9		1581

The above table, showing the results of an experiment given in the Journal of Agriculture, for the purpose of proving the best depth for burying the different kinds of grass seed, cannot fail to be interesting and valuable to our farmers. It was performed as follows:—Two boxes, each one foot wide, and five feet ten inches long, were filled with soil; No. 1, to within a quarter of an inch of the top; No. 2, to the top on one side, regularly sloping to within three inches of the top on the other side. Both boxes were then divided across by slips of wood a foot long and two inches broad, so as to leave fourteen spaces 1 foot long in each box. Fig. 16 will show these divisions, box No. 2 being filled to the top on the side A, and three inches from the top on the side B. The same weight of seed was sown in each box, the slips of wood were removed, and the boxes filled to the top with soil. The seed in box No. 1, would thus be all buried a quarter of an inch deep; and in No. 2 from no depth to three inches. They were placed in a green-house, for the first ten days, to prevent the risk of heavy rains, which would have crusted the surface. This may have caused the seeds to spring from a greater depth than under other circumstances.

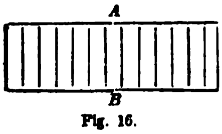


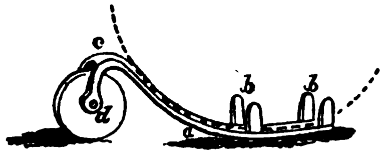
Fig. 16.

The quantities of each sown, (except Timothy, which was about double the rest,) were such as would have produced about the same number of plants to an equal surface, but the experiment being performed in summer, (Aug. 1,) the different kinds had variously diminished in vegetative powers. This diminution with clover is such, that the experimenter, S. D. Stirling, remarks, that clover seed " kept over one summer, would be dear at half price."

The whole furnishes a striking exhibition of the loss sustained in all cases by harrowing grass seed deeply into the ground. This is especially the case with very small seeds, as Timothy and Wood grass, none of the latter vegetating an inch beneath the surface, though this remark would more strongly apply to a heavy than to a light soil.

The writer also makes the excellent recommendation to " all who would avoid disappointment, to prove *all* their grass, clover, and turnep seeds before sowing, by sowing a small weight in a pot, and placing it in a warm situation, and counting the plants which come up," by which they will often find that 30 pounds in some cases will be cheaper than 20 pounds in others.

The scientific names of the plants are given to prevent mistake where different common names are known in different districts, and which have enabled us to add or substitute some common names in place of those which are nearly unknown to our farmers.



WELSH WHEEL-DRAG—(Fig. 17.)

This drag is described in the Journal of Agriculture; and from its convenience, simplicity, and ingenuity, is worthy of the attention of our farmers and mechanics. It consists of a sole or shoe, *a*. with two pairs of ears, or projections, *b*. *b*. to hold the wheel to its place while resting upon the shoe. The neck *c*. is forked at its extremity for receiving the small roller or wheel *d*. which is about nine inches in diameter. The curvature of the neck and shoe is such as to fit the outside of the wagon wheel, represented by the dotted line.

The peculiar convenience of this drag is, that it requires no chain to attach it to the forward part of the wagon, forming a distinct and independent carriage of itself. For the neck *c*. rising a foot above ground, prevents the wheel of the wagon running over it, the moment the wagon wheel begins to mount, its weight is thrown on the small wheel which then immediately rolls forward. The wagon wheel is thus partly supported by the small wheel and partly upon the shoe *a*.; and the drag cannot escape from it, being held by the ears *b*. *b*. When not in use, it may be thrown into the wagon.

The wheels cast at our furnaces for plow-wheels would doubtless answer for the wheel of the drag.

FEEDING BOXES FOR COWS—(Fig. 18.)

The annexed figure represents a cheap and good feeding box for cows, which has been found very convenient in foddering them with hay, or other winter food. It is six or seven feet square; the height is about two feet and nine inches, for cows of common size—it must not be too high for them to reach easily over the side, and not so low that they can jump into it. The depth of the *box* is about fifteen inches. There are 2 cross pieces only, morticed into the posts, to stiffen the whole and to support the bottom boards. Four cows will eat from it at once; and it will be impossible for them to tread the hay under feet and waste it. A common workman will make one in two or three hours.

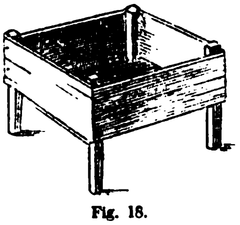


Fig. 18.

ROOT SLICERS—(Fig. 19.)

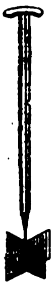


Fig. 19.

PERSONS owning large farms, and having many cattle to feed with roots, will doubtless find it cheapest to have good root-slicing machines, costing from ten to twenty dollars. But for farming on a more moderate scale, the owners will find them by no means necessary. Fig. 19 represents a tool, not costing more than a dollar, which by a single stroke on a turnep or potatoe, will chop into four pieces; and if the roots are placed in a square plank trough or box, rapid strokes with this tool will cut nearly as fast as some of the most costly machines. In the absence of this, a well ground spade, or what is better, a steel shovel, will cut rapidly. We find that horses generally prefer to gnaw down ruta bagas uncut, and cows seem to care very little about having their food thus previously carved up. At all events, therefore, don't be in too great a hurry to buy a slicing machine at fifteen or twenty dollars—try a subsoil plow first, at any rate.

SCAB IN SHEEP.

THE scab in sheep, the mange in cattle, horses, dogs, &c., and the itch in man, are well ascertained to be caused by parasitic insects, (though of a different class from lice or ticks,) belonging to the *Acari* or mite tribe—exceedingly minute in size, and living in the skin of the animals with which they are brought in contact. The origin and economy of this class of insects have attracted from naturalists considerable attention. That their origin is sometimes spontaneous, owing to the neglect or mismanagement of the animal, is known; yet when once brought into existence, they have the same difference of sex, and in their propagation are governed by the same laws, as animals of the higher orders. In relation to the mysterious but interesting question as to how these animals first have existence, Mr. Youatt eloquently observes:

"Physiologists are fast acknowledging the work of a mysterious but noble principle—the springing up of life under new forms, when the component principles of previous beings are decaying, or have seemingly perished. Thus if we macerate any vegetable substance, the fluid will teem with myriads of living beings, called into existence by the process we are conducting; or rather by that power of nature, or that principle bestowed by the Author of Nature, that life, ceasing in one form, shall spring up in others, and this while the creation lasts! Thus we have probably the hydatid in the brain of the sheep, and the fluke in its liver—parasitical beings which we recognize in no other form and in no other place. *They were the product of the diseased part.* In like manner, the acarus of the scab may be called into existence by the derangements which our neglect, or unavoidable accident, or disease, may have made in the skin of the sheep; and having sprung into life within the pores of the skin, obeys the laws of all living beings as to its after existence and multiplication."

Walz, a German veterinarian, made some curious experiments with the acari. He found if some of the females are placed on the wool of a sound sheep, they quickly travel to the root of it, and bury themselves in the skin, a minute red point, scarcely visible, distinguishing the place where they penetrated. The tenth or twelfth day afterwards, a slight swelling may be discovered, the skin changes its color, and has a greenish blue tint. The pustule forms rapidly, and about the sixteenth day breaks—the mothers again appearing, with their little ones attached to their feet, and covered by a portion of the egg from which they have just escaped. The little ones immediately penetrate the neighboring skin, find their proper nourishment, grow and propagate, till the poor animal, under the torment occasioned by the myriads which prey on him, rapidly sinks down, and at last dies.

Walz also placed some of the *male* acari on the sound skin of a sheep. They burrowed into the skin, and in due time the pustule arose; but all indications of the scab soon disappeared with the employment of any remedy. He therefore concluded that the disease can be communicated from sheep to sheep only by means of the contact of the sound animals with the diseased, or, as they lie near others, impregnated acari traveling from the infected to the sound sheep. The itching which diseased animals suffer, induces them to rub themselves much against posts, or any projecting substances, and these rubbing places become undoubtedly fruitful sources of infection.

We here give cuts of the acari, as delineated by Walz, highly magnified.

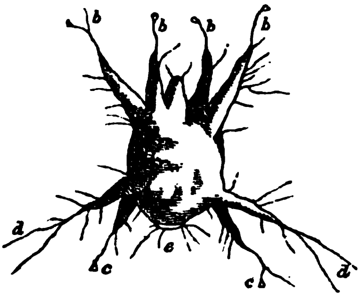


Fig. 20.

Fig. 20.—The female, of 366 times the natural size, larger than the male, of an oval form, & provided with eight feet, four before, and four behind.

a.—The sucker.

b. b. b. b.—The 4 anterior feet, with their trumpet like appendices.

c. c.—The two interior hind feet.

d. d.—The two outward feet, the extremities of which are provided with some long hairs, and on other parts of the legs are shorter hairs. To these hairs the young ones adhere when they first escape from the pustule.

e.—The tail, containing the anus and vulva, garnished by some short hairs.

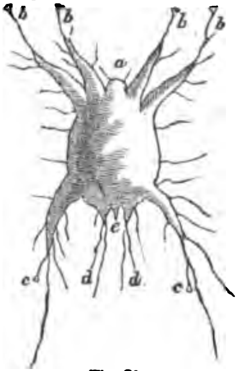


Fig. 21.

Fig. 21—The male on its back, and seen by the same magnifying power.

a.—The sucker.

b. b. b. b.—The fore-legs with their trumpet-like appendices, as seen in the female.

c. c.—The two hind legs, with the same appendices and hairs.

d.—The rudiments of the abdominal feet. *e.*—The tail.

From what has been said it must be obvious that the cure of scab lies in the destruction of this insect. Washes of tobacco, hellebore, &c., are sometimes used, but as the insect lies within the skin, we can never be certain of reaching it with these remedies. They may sometimes prove successful, but in general they only mitigate the disease, which, though it may be thus kept for some time in a latent state, will at length break out to the disappointment and vexation of the shepherd.

A safer method is the application of some substance that will be sure to poison the acari. An ointment compounded according to the following recipe, has proved in our own practice, entirely efficacious.

Let one pound of pure quicksilver, Venice turpentine, and common oil, of each half a pound, and four pounds of hog's lard, be triturated in a mortar till the quicksilver is thoroughly incorporated with the various ingredients.

In using so strong a preparation of mercury, care should be taken that the sheep are properly protected from bad weather. It was in the depth of winter, and in a very cold climate, that we had occasion to use this ointment. Not being at that time acquainted with scab, the sheep became very seriously affected before the disease was identified. Some of the flock lost nearly all their wool, and their bodies, nearly covered with ulcers, presented a most disagreeable appearance. They were put into a barn, kept comfortably warm, and not allowed to go out, except for a short time in the middle of the pleasantest days. In using the ointment, a lump half the size of a hen's egg was used to each sheep, and particular pains were taken to rub it well into the large veins about the neck. It was also rubbed along the back, and in the worst cases in lines down the sides. Every sheep was saved, and in three weeks all were well; while some of our neighbors, who, from fear of the effects of mercury, trusted to other applications, lost many; and after having kept the disease lingering among their sheep for more than a year, killed them and burnt up the carcases to stop the infection.

NEW-YORK STATE AGRICULTURAL SOCIETY.

THE annual meeting of this Society was held at the old State Hall in this city, on Wednesday, the 15th of January. The meeting was well attended—a general and spirited interest was manifested in the affairs of the Society, and all its business was transacted with promptness and unanimity. The President, Hon. J. P. **BEEKMAN**, was in the chair. Reports were made by the Corresponding and Recording Secretaries, Treasurer, and several Committees. From the report of the Treasurer, it appears that the receipts of the Society during the last year, were as follows:

Interest on stock, - - - - - -	$210,00
Donation from John Greig, - - -	50,00
" " Geo. Vail, - - -	25,00
" " Robert Donaldson, -	12,00
" " J. P. Beekman, - -	50,00
" " J. McD. McIntyre,	20,00
" " Joel Rathbone, - -	25,00
" " Wm. H. Seward, -	50,00
Receipts at Fair, - - - - - - -	3,723,80
Appropriation from the State, - -	700,00
	$4,865,80
Payments.	
Premiums, - - - - - - - - -	$1,600,50
Balance due former Treasurer, - -	114,23
Recording Secretary, - - - - -	550,00
Expenses at Fair, - - - - - -	300,00
Subscription to Colman's European Agriculture, - - - - - - -	100,00
Design for Diploma, - - - - -	50,00
Binding, - - - - - - - - -	328,00
Printing and advertising, - - - -	409,34
Incidental, - - - - - - - -	481,84
	$3,933,91

On motion of H. S. **RANDALL**, a vote of thanks was tendered to the Corresponding and Recording Secretaries and Treasurer, for the valuable services they have, in their several capacities, rendered the Society.

Hon. **JOHN GREIG**, Chairman of the Committee to whom was referred the subject of the introduction of books of agriculture into primary schools and school libraries, made a highly interesting and elaborate report, which was received with evident approbation.

On motion of Hon. Mr. **DENNISTON**, a Committee of three from each Senatorial District, was appointed by the chair to make a nomination of officers for the ensuing year, and to recommend a place for holding the next fair.

Several reports on various grain crops, roots, &c., were made to the Society, of which, not having room for them in detail, we give the following abstract:

WHEAT.—First premium to Matth. Watson, Canandaigua, he having raised 215 bushels of wheat on 4 acres, 12 poles of ground, or nearly 52½ bushels per acre.

CORN.—The first premium on corn was not awarded. The committee award the second premium on corn to J. F. Osborn, Port Byron, Cayuga county, his crop being 213 bushels and three-eighths of a bushel, on two acres of land.

Several other applications for wheat and corn crops, were rejected from defects in the returns.

BARLEY.—First premium to Stephen B. Dudley, of East Bloomfield, Ontario county, his crop being 69 bushels per acre, on a lot of two acres. The second premium to Wm. Wright, of Vernon, Oneida county, his crop being 50 bushels and 47 lbs. per acre, on a lot of two acres. The third premium to Nathaniel Wright of the same place, his crop being 47 bushels 25 lbs. per acre, on two acres of ground. Bani Bradley stated that he had raised 55 bushels 3 lbs. to the acre. The rule of the Society requiring two acres, this crop was excluded, there being only one acre and two roods. Some other crops were not entitled to premium from defects in the returns.

OATS.—The first premium to Seth Lawton of Washington, Dutchess county, his crop being 120¼ bushels per acre. The second premium to J. F. Osborn, of Port Byron, Cayuga county, his crop being 104 bushels per acre, on a lot of two acres and nine rods. Several statements were necessarily rejected from the imperfections of the returns. There are no competitors for the premiums on rye, peas, and corn sown broadcast.

BUTTER.—Only two applications were made for premiums under this head. The committee award to Geo. Vail, Esq. of Troy, a silver medal. Mr. Vail's cows were Durhams. Six of them, kept on grass feed only, produced in thirty days, 262 lbs. 9 oz. of butter, averaging for each cow, 43 lbs. 12 oz. The milk of one of these cows was kept by itself for thirty days, and yielded in that time 52 lbs. 9 oz. of butter.

CLOVER SEED.—A volume of the Transactions for 1844, was awarded to Henry Brown, of Enfield. Ten bushels of seed, weighing 60 lbs. per bushel, one bushel and eleven pounds weighing 52 lbs. per bushel, and half a bushel of tailings, weighing 38 lbs. per bushel, were produced on three acres and ten rods of ground.

RUTA BAGA.—First premium to John G. Smedberg, of Greene Co., having raised 1160 bushels on one acre, and 2173 bushels on two acres.

H. S. Randall, of Cortland, the second premium, his crop being 820 bushels per acre.

C. B. Meek, of Ontario Co., the third premium, his crop being 724 bushels per acre.

CARROTS.—First premium to Wm. Risley, of Chatauque, his crop being 1059 bushels per acre. One applicant only.

MANGELWURTZEL.—First premium to C. B. Meek, his crop being 1101 bushels per acre. One applicant only.

SUGAR BEETS.—To J. F. Osborn, of Cayuga Co., the third premium, his crop being 657 bushels per acre. One applicant only.

No application was made for the premium on potatoes or cabbages.

The Committee appointed to nominate officers, reported the following list, which was unanimously adopted:

B. P. Johnson, of Oneida, President.
James Lennox, of New-York, Vice-President
Thomas L. Davies, of Dutchess, V. P.
E. P. Prentice, of Albany, V. P.
H. W. Doolittle, of Herkimer, V. P.
Benjamin Enos, of Madison, V. P.
O. C. Crocker, of Broome, V. B.
Henry S. Randall, of Cortland, V. P.
George W. Patterson, of Chatauque, V. P.
Daniel Lee, of Erie, Corresponding Secretary.
Luther Tucker, of Albany, Rec. Sec.
Thomas Hillhouse, of Albany, Treasurer.

Additional Members.—T. S. Faxon, of Utica; E. Kirby, of Brownville; Alex Walsh, of Lansingburgh; Geo. Vail, of Troy; J. M. D. M'Intyre, of Albany.

The Committee also reported in favor of Utica, as the place for holding the next fair.

In the evening, the Society met in the Assembly room of the Capitol, to hear the address of President **BEEKMAN**. This was a valuable production, evincing sound judgment and practical observation. Its leading objects were, a description of the past operations of the Society, and its influence in improving the condition of agriculture, embracing also some excellent observations on the advantages of a proper course of agricultural education.

On motion of Judge **JONES**, a vote of thanks was tendered by the Society to Dr. **BEEKMAN**, for the able manner in which he has discharged the duties of presiding officer, and requesting for publication a copy of his address.

On retiring from the chair, Dr. **BEEKMAN** introduced the President elect, Mr. **JOHNSON**, who, on taking his seat, addressed the Society in a neat and appropriate speech.

On motion of Gen. Viele, of Troy, it was

Resolved, That a Committee be appointed to prepare a memorial to the Legislature at its present session, for the renewal of the act to promote Agriculture, passed in 1841.

The Committee to whom was referred the consideration of claims for premiums on Essays and Text-book, have not yet reported on that subject, but are expected to submit their report at the next meeting of the Executive Committee, which will be on the 13th of February next.

EXECUTIVE COMMITTEE.

The new board of officers met at the Society's room, Jan. 16, the President in the chair. Present, Messrs. Prentice, Walsh, Kirby, Randall, McIntyre, Faxon, Vail, Lee, Enos, and Tucker.

On motion of Major Kirby,

Resolved, That the next annual Cattle Show and Fair be held at Utica, on the 16th, 17th, and 18th days of September next.

On motion of Mr. Tucker,

Resolved, That a committee be appointed to make arrangements for a series of weekly agricultural meetings, to be held in the Assembly Chamber, and also to take such measures as may be deemed necessary in relation to the room assigned to the Society by the State authorities. The committee appointed, consists of Messrs. Johnson, Beekman, and Tucker.

After considerable progress in making out the Premium List, it was referred to a committee, consisting of the President, Messrs. Lee, Prentice, McIntyre, Hillhouse, and Tucker, to report at the next meeting of the board.

The regular meetings of the Executive Committee will be held at the Society's Room in the old State Hall, on the *second Thursday* of each month.

SOCIAL AGRICULTURAL MEETINGS.

The social meetings of farmers, Members of the Legislature, and others interested in Agriculture, which took place in this city last winter, and in which so much interest was manifested, have been resumed. A meeting was held at the Old State Hall, on Thursday evening, Jan. 16th, at which the President elect of the State Agricultural Society, B. P. Johnson, presided, and an organization was effected for the future. This organization is as follows: Hon. J. P. Beekman, (ex-president of the State Ag. Society,) President—Robert Denniston, E. P. Prentice, and Edward S. Salisbury, Vice-Presidents—D. Lee, Sanford Howard, and E. Mack, committee to prepare subjects for discussion. The Editors of the Cultivator were appointed to act as Secretaries.

At this meeting Dr. Lee made some interesting remarks on the necessity of, and the advantages which would be derived from, a system of thorough scientific and practical education, applicable to the profession of agriculture.

At the close of Dr. Lee's remarks, a desultory discussion was carried on for the remainder of the evening, in which Judge Leland of Steuben county, Major Kirby of Brownville, Messrs. McVane of the Assembly, Stuart of Rochester, Howard of Albany, Comstock of Rome, and the President, took part. Many useful facts were elicited, and the meeting was in all respects highly satisfactory to those present. We took some notes of the remarks made, but are obliged for the present, to postpone their publication.

These meetings will be continued every Thursday evening, during the session of the Legislature, and will in future be held in the Assembly room of the Capitol.

PREMIUM SHEEP BARN.

We are requested by Mr. L. A. Morrell to offer a premium of ten dollars, for the best plan of a *sheep barn*, adapted to feeding within doors, with drawings of the racks, yards attached, &c., with plans of deposit for roots, grain, &c., the quantity of hay it will hold, and a particular explanation of the whole, and the number of sheep it will accommodate; to be forwarded to him, addressed to Lake Ridge, Tompkins Co., N. Y. The award will be made by the President of the N. Y. State Ag. Society, and two members of the Executive Committee.

We are further requested to say that his object in this is, to insert the same in the work he is now preparing for publication on Sheep Husbandry, which he hopes to have in readiness for the printer by about the first of May ensuing.

FIRE BLIGHT IN PEAR TREES.

An extended and elaborate paper on this subject, read before the Indiana Horticultural Society, by the author, Henry W. Beecher, appears in a late number of Hovey's Magazine. After many accurate observations, the writer comes to the conclusion, that whatever may be the cause of *fire-blight* in New-England, which he does not deny may be caused by an insect, the great blight the past season in the Western States was produced by the weather and season. The high source whence this paper originates, entitles it to great respect, and from the importance of the subject, a particular notice is demanded.

According to the theory laid down, the blight is produced by a warm, moist autumn, inducing late and succulent growth, followed by early and cold winter weather. Thus from a state of rapid growth, with unripe wood, the trees are at once forced as by a shock, to a sudden state of rest; the fluids are frozen, the tender vessels are burst or lacerated, and a succession of warm suns and severe nights, augments the disaster. After speaking of the effects of this freezing,—lacerated passages,—thickened and diseased sap,—torpidity of parts,—and obstruction of circulation,—he remarks, "At length, the spring approaches. In early pruning the cultivator will find in those trees, which will ere long develope blight, that the knife is followed by an unctuous sap, and that the liber is of a greenish yellow color. These will be the first signs, and the practiced eye will detect these long before a leaf is put forth." He further adds, "the leaf puts out, and no outward signs of disease appear nor will it appear until the leaf prepares the downward current. May, June, and July, are the months when the growth is most rapid, and when the tree requires the most elaborated sap; and in these months the blight is fully developed. When the descending fluid reaches the point where, the previous fall, a total obstruction had taken place, (from causes already mentioned,) it is as effectually stopped as if the branch were girdled. For the sap which had lodged there, would, by the winds and sun, be entirely dried. This would not be the case if the sap was good and the vitality of the tree unimpaired; but when the sap and vessels are both diseased, the sun affects the branch on the tree, just as it would if severed and lying on the ground. There will therefore be found on the tree, branches with spots where the bark is dead and shrunk away below the level of the surrounding bark; and at these points the current downwards is wholly stopped. Only the *outward* part, however is dead; while the *alburnum* or sap wood is but partially injured. Through the alburnum, then, the sap from the roots passes up, enters the leaf, and men are astonished to see a branch seemingly dead in the middle, growing thrifty at its extremity." Thus the growth may in some cases continue late in summer.

In other cases, where the downward flow of the sap, is only partially, and not wholly obstructed, the downward current takes with it this thickened, diseased, and poisonous sap, and spreads the contagion gradually downwards.

Many interesting facts are adduced in support of this theory, some of which may be briefly mentioned. The two great blight years in the Western States, 1832 and 1844, were preceded by just such weather as has been spoken of; and a skillful cultivator predicted six months previously by an examination of the trees, not only the extent of the disaster, but what particular trees and what individual branches would first perish. In one case given, out of 200 trees, only *four* escaped. These four had been *transplanted*, had grown but little during summer and fall, and consequently the wood was well hardened. But another collection of trees, also transplanted, though growing but little in summer, made a vigorous growth in fall, and suffered severely from blight. In these cases names and dates are given. Another case was that of Mr. White, a nurseryman near Mooresville, Morgan County, Ia., in an orchard of from 150 to 200 trees, who had not a single case of the blight in the year 1844; although all around him its ravages were felt. What were the facts in this case? His orchard is planted on a mound-like piece of ground; is high, of a sandy, gravelly soil; earlier by a week than nursery soils in this county; and in the summer of 1843 his trees grew through the summer,—wound up and shed their leaves in the fall, and during the warm spell made no *second growth*."

In another place, he says, "Sometimes the bark bursts, the sap exudes, and runs down, turning black; and its acridity will destroy vegetation, on which it may drop; and shoots at a distance from the trunk, upon which the rain washes this ichor, will soon perish." This must be a case of unusual virulence, as we have never witnessed it.

The author of the paper points out the distinction between blight, and mere *winter killing* which destroys the tree at once.

He recommends, to prevent the evil, to select warm, dry soils, so as to ensure early, well ripened growth; to select such varieties as ripen their wood early; and to prevent late growth where necessary by *root pruning*. When blight has actually taken place, excision is recommended as a matter of course.

This theory, which accords with the views we have favorably regarded and frequently expressed for the last ten years, so far as most of the cases in Western New York are concerned, is supported by too many facts to be easily overthrown. In case of *apricot* trees, we have often noticed the dried and dead portions, caused evidently by severe weather on that tender tree, and the subsequent heat of the sun, while the branches above were in a state of rapid growth. But this rapid growth soon needed a larger supply of sap than the drying stem below could furnish, and sudden withering and death followed. We have also witnessed cases of the *poisoning* quality of such diseased sap, in the *peach* tree: For the sake of experiment, some buds were started after being set in summer, and made a very succulent, unripened growth of several inches. Next spring they commenced growing, but soon died suddenly, evidently from the effect of the winter on the tender and unripened wood, and the branch itself not only died, but the poison ran down to the very roots, which in every case of this experiment turned brown to heir extremeties, showing the circulation of the poisonous fermented sap. The *Madeleine pear*, which is remarkably thrifty in its growth, as well as succulent in its texture, is peculiarly liable to blight, nearly all the cases which have occurred under our own immediate notice, being on this variety; while after the most rigid examinations we have never found the insect. The *Seckel*, a very hardy slow-growing variety, is rarely if ever affected. We have often seen discolored, diseased, or dead strips on the branches extending gradually downwards, until large portions of the tree were dead. Hence the importance of cutting off the affected limbs without a moment's delay, and also some distance below any indications of disease,—as the poison may have passed downwards, and not as yet produced any visible effect. With this care, we have never known the remedy to fail, if vigorously applied.

Against this theory, the following facts are stated by P. BARRY in the last number of the N. G. Farmer. "In the Mt. Hope Nurseries, there are several thousand pear trees of various ages, from 1 to 8 years old, and highly susceptible of blight from this new cause, yet there has never appeared the slightest indication of it, while the disease has been committing serious depredations in the immediate vicinity on large trees, much less likely to suffer, because less excited to growth by high cultivation. We have seen many trees killed by this disease, that had not grown a foot in two or three years." Perhaps the cases of early and late ripening already given, may throw some light on this subject. Good, healthy, and vigorous trees, in the well cultivated nursery, may mature their wood early; others, though growing more slowly, may not as in case of the transplanted trees, which commenced growing in autumn. But it must be remembered that *blight* is *death;* girdle a limb, and it will wither and turn black, just as in fire-blight; and no one theory, nor no two, may explain truly all the cases or classes of cases which occur. In the nursery of the writer, the tops of several thrifty young pear trees, in a low, warm place, were observed to be dying last summer when in leaf; what the result would have been is unknown, as they were all immedietely cut off and burned, and the disaster no more appeared. Why the blight should in some cases destroy the whole tree; in others only a branch and proceed no further, may be hard to explain; but may possibly depend on different degrees of virulence of the poisoned sap, or various states of hardiness and vigor, on peculiarities of soil, or of seasons, or on all these more or less combined. Killing the tops of young peach trees by cold, does not usually destroy the whole tree, but this is sometimes done, as in the budded trees before mentioned. Further and accurate observations are needed.

SENECA CO. AG. SOCIETY.

We are indebted to JOHN DELAFIELD, ESQ'R, of Geneva, for a copy of his address before this Society. It is a spirited and interesting production, containing many valuable historical remarks, as well as agricultural facts. He informs us that in 1780, the soil of Seneca county, was first trodden by the white man! That fifty years ago, the county contained only *seventy-five* inhabitants, exclusive of the red-men—and that probably at that time, not more than twenty acres of land were cultivated. "What a contrast," he remarks, "with the present day! Then, a sun-beam scarce broke the forest's gloom, nor did a Woodman's axe disturb the awful solitude of nature. What a contrast with the present hour and place! The land now pouring forth its wealth to bless and reward the farmer's toil—children and children's children, as the polished corners of the temple, gladdening his heart and leading him with happiness, and gratitude in every heart, toward the end of his most useful and virtuous life."

In relation to the errors of cultivation, Mr. D. remarks—

"We divide our labor over too many acres to afford sufficient culture to each—and we neglect the aid of science, which teaches us to concentrate the varied means always within our control, and their economical and appropriate application. This will perhaps be admitted, when we notice the small average produce of wheat per acre, of any section of our country, and compare it, with the products of wheat readily obtained from well cultivated fields."

The benefits of agricultural papers, in giving to farmers the results of each others' experience, are thus strikingly shown:—"The agricultural periodicals of this country, bring to the fire side, and leisure hour of every farmer, the tried results of experiments throughout the world—they give to him the practice of every section of our country—they open to him the science of his profession—muking clear and intelligible all that heretofore has been deemed chance."

MR. LAWRENCE'S ADDRESS, before the Yates County Agricultural Society. The main object of this address, appears to be to induce farmers to qualify themselves for taking that share in the direction of political affairs, which, from their numbers and the proportion they contribute for the support of goverment, justly belongs to them. We give an extract:

"The time has arrived when farmers as a class should understand their true position, and should arise in their might to vindicate the dignity of their profession. We often hear farmers complaining that their class is not fairly represented in our national councils, and these complaints are often well founded, and who are to blame but themselves, for it is through their ignorance and apathy that they are made the tools and dupes of demagogues and politicians."

ERRATUM.—On the second column of page 327 of last year's volume, for "Musk," read *Musch*, the name of the city from which this variety of the Apricot was called.

Foreign Correspondence.

MR. NORTON'S LETTERS—No. VII.

Lab. of Ag. Chemistry Association,
Edinburgh, Nov. 28, 1844.

LUTHER TUCKER, Esq.—In my last letter I gave a report of Prof. JOHNSTON'S Lectures in Ayr; I will now notice some of the farms in that region, which struck me as worthy of attention. The country in the immediate vicinity of Ayr, is generally cultivated with much skill, and some portions of it would compare even with the Lothians.

For several days I was at the place of Mr. CAMPBELL of Craigie, who is proprietor of a considerable estate, about half a mile from the town, and who, by influence and example, has greatly contributed to the advanced condition of agriculture in his district. His farm is in fine order, and there are numerous experiments in progress. In one field the effect of guano upon the second year's grass, was very striking; not only was it more luxuriant than parts of the field where other manures had been applied, but sweeter, for the cattle evidently preferred it, and kept it eaten close to the ground.

The farm of Mr. JOHN TENNANT is considered one of the best in the neighborhood of Ayr. It is about three miles from the town, and comprises 600 acres. Nearly the whole is laid out in 40 acre fields. This gives the farm a beautiful appearance, besides saving a vast amount of labor both in working of the land and in making and repairing fences. Mr. Tennant has drained every field, and in answer to a question of mine respecting a certain kind of land, supposing it *undrained*, he said, that of undrained land, he could tell me nothing; with him draining was an indispensable preliminary to improvement. He has a fine dairy of 90 Ayrshire cows, considering them the best breed for milk. He has a cross with the Durhams, but it is only for fattening. The grain crops were all in the stack yard, but there were about 20 acres of turneps in one field that would average 30 tons to the acre. They were raised with guano and various other portable manures, in most instances combined with farm-yard dung. This is far the best method of applying these manures, as it has been found to unite economy with actual increase of effect.

About six miles from Ayr, I visited the farm of Mr. BURNETT of Gadgirth. It lies high, and is surrounded by a rather bleak unproductive tract upon which the crops looked sickly and the herbage of the pasture lands miserably scanty, except in the hollows of the ridges, where was a considerable crop of rushes. A few years since Mr. Burnett's land was in the same condition. By the judicious application of modern science and practical skill, within five years he has doubled its value, and made a farm that for neatness and evidence of improvement can scarcely be surpassed. The crops remaining in the ground were quite heavy, especially the turneps. In one of the fields is a kiln, where lime is burned for the farm, and in another a tile work, for the manufacture of draining tiles, which can easily supply the neighboring proprietors when they are prepared to follow Mr. Burnett's excellent example. He has made 200 miles of drains on his own farm, having laid 150,000 tiles in a single season. The stock as usual, in that district, is Ayrshire, and the dairy is a model of good order and neatness. At the time of my visit, the operation of clearing away a portion of the original Caledonian forests was going on, and the ground preparing for cultivation. Instead of putting in the plow at once, and running about among the stumps, as I fear most of our farmers would have done, every root even, was dug out as the work proceeded. The whole soil was thoroughly broken up and turned over by the spade to the depth of two feet, and drains put in 6 inches lower. This field at once, therefore, will be in a fit state for perfect cultivation, and will immediately bear remunerating crops. On this farm is also a coal mine worked at the depth of 200 feet, which yields coal of excellent quality. With his own lime kiln, tile works and coal mine, Mr. Burnett is in an extraordinary degree independent of foreign aid, and a look at his farm, would, I think, convince the most sceptical, that *book farming* may with advantage be combined with practical wisdom.

On visiting the fine farm of Mr. ALEXANDER of Southbarr, near Paisley, my attention was chiefly directed to the difficulty he has encountered in drainage. The subsoil, to an extraordinary degree, abounds in iron, so much so that it actually in some instances has choked the tiles. He has however, contrived in the worst places, to obviate this by occasionally letting in a powerful stream of water at the upper part of the drain which sweeps it clear. The sides and bottom of the open drains are thickly incrusted with iron. It is certain that the drains will in a few years diminish its quantity, but at present it is a most serious evil. Mr. Alexander pointed out to me a cross between a Southdown buck and Cheviot ewes, which he admires much, and intends raising extensively. This gentleman has another farm at Muirkirk, in one of the wildest parts of Lanarkshire, where he has made great and admirable improvements. At some future time I hope to visit it.

The last estate which I visited was that of Mr. FLEMING of Barochan, also near Paisley. Here I was much interested by the improvements which have been made on a portion of a large peat moss or bog, 150 acres in extent. The limits of my present letter forbid my giving an account of the excellent and economical method pursued; suffice it to say, that where peat was once 20 feet in thickness, are now firm beautiful fields, producing very heavy crops, in one instance nearly 80 bushels of oats to the acre. The whole moss will in a few years be converted into a fertile farm. Mr. Fleming has a very considerable knowledge of chemistry, and hence the numerous and varied experiments conducted under his superintendence, have been of great practical value. Many of the most remarkable results are to be found in the appendix to Prof. Johnston's Lectures on Agricultural Chemistry and Geology.

Were it not that I fear trespassing on the patience of your readers, my remarks upon these model farms, as they may justly be termed, might extend to a much greater length. In the hope that even these imperfect sketches may give an idea of some features of improved Scottish husbandry, I am, very truly yours,

JOHN P. NORTON.

LETTERS FROM MR. MITCHELL—No. II.

Liverpool, England, Dec. 3, 1844.

LUTHER TUCKER, Esq.—I walked out yesterday to have a look at the Liverpool cattle market, held every Monday about three miles from town, on the road to West Derby, where lie the seats of the Earls Sefton and Derby, which at some future time I will take occasion to describe to you. I noticed in the streets the first ice of the season; the air was fine, cool and bracing early, but clouded as usual, and was dull before I reached the ground. I met upon my way numbers of butchers returning to town with their purchases, or driving them to their fields, of which I spoke in my last. The market is situated immediately by the side of the great "London Road," upon level paved ground, containing pens for about 3,000 cattle, and 7,000 to 8,000 sheep. The beef cattle were mostly from 3 to 5 years old, bullocks and heifers, varying very much in color, form and weight. The average weight of a 3 year old bullock, I should judge to be 6 to 700 lbs. dressed (in New England way, with hide and tallow.) The best of the cattle were from Ireland; and nine-tenths of all there, were either from Scotland or Ireland. I noticed many of the Galloway polled cattle. The Herefords and Durhams are not known in this market, and none stand so high as the Scotch and Irish black cattle. I observed to a drover that the Herefords were perhaps the first in the Smithfield market. "Ah, sir," said he, "we wish the flesh that's on light bone, and care nothing for the breed."

"And pray, sir, what may such heifers be worth?" said I, pointing to a pair of smooth, black polled Scotch animals just then driven out. "Sure, sir, and nothing short of £27 ($120) could buy them." They would dress perhaps 680 to 700 lbs. each. Difference in "feel" made great difference in sale of cattle of apparently equal weights. The price of those sold under my observation, would range, I should think, at from 36 to 50*s.* a cwt. ($7 to $9.50.) There were no poor cattle, and few very fat ones; indeed it is not the season for fat beef yet. On the conclusion of a bargain for any particular drove, the cattle were driven into the road, where they were taken in charge by boys and dogs—admirably trained (the dogs I mean) for the purpose, selecting, by direction of the owner, an individual from a herd of cattle, and keeping a single one or more to the beaten track. They sell readily at from £2 to £10.

The sheep are wholly Scotch and Irish. The Scotch, small; most of them a black-faced, shaggy, long wooled animal, selling from 15*s.* to 25*s.* ($3 to $5.) The large Irish sheep—elegant mutton they were too, as our dinner to-day testifies—sold for 20*s.* to 36*s.* The Southdowns are not appreciated in this market. There were on the ground about 2,000 cattle and 7 to 8,000 sheep. A large part is bought by butchers, in small droves, from Birmingham and Manchester, this being the great receiving port of cattle from every part of Ireland. Still there are large butchers here who never attend the market, supplying themselves by regular engagements with their own drovers. No veal and but few milch cows come to this market. A good new milch cow sells at from 14 to £20. Veal is plenty in the town market at about 7*d.* the pound. Some I noticed beautifully dressed, a day or two since, weighing some 45 lbs. to the quarter. But I must leave the town markets, their number, their size, their display, their throngs, &c., for another letter.

Notwithstanding the increased importation of live stock from Ireland, not only to Liverpool, but also through Bristol to London, there have been, beside shipments of salted beef this year, thus far, to amount of 8,000 tierces and 600 barrels to this port, and 5,000 tierces and 282 brls. to London; beside 13,000 tierces and 20,000 brls. of pork to London, and as much more here. No wonder England cherishes her close relationship with Ireland! Who can sneer at her bogs and fens, with such evidence of her agricultural products?

The market prices for the past week, which it may perhaps interest you to know, have been: For potatoes (of which considerable quantities are being shipped,) 2*s.* 6*d.* to 4*s.* 6*d.* a cwt. Beef, 2*s.* 4*d.* to 3*s.* 6*d.* per 8 lbs. Pork, 2*s.* 10*d.* to 4*s.* Mutton, 2*s.* 8*d.* to 3*s.* 8*d.* Hay, coarse meadow, 3*l.* 15*s.* to 4*l.* 16*s*; fine upland, 5*l.* 5*s.* to 6*l.* 10*s.*

Hay has been imported in one or two instances from America, but for some reason, has not done well. The duty is 16*s.* per load. I will give you in my next a full schedule of duties and port charges on all American agricultural products.

Apples have of late come in, in considerable quantities—selling with duties paid (6*d.* per bush.) at from 12*s.* to 22*s.* per brl. All depends upon the packing. A brand known to open well, will fetch from 3 to 5 shillings more than a new brand. Some are packed in sawdust, some in straw. Fuller details on this subject in future. Salted beef has sold the past week, American mess, from 1*l.* 8*s.* to 1*l.* 18*s.* per brl. Pork, mess, 2*l.* 4*s.* to 2*l.* 10. Lard, American, sells quick at 1*l.* 15*s.* to 2*l.* 1*s.*

Imports of flour past week, from America, 3,515 brls.

You may expect in future a running comment on the weekly markets, so far as they relate to American produce. Also any thing that may come in my way of interest to an American farmer.

I will endeavor to send you by next steamer a sketch of an English farm house and out-buildings, to afford some presentment to the eye of the *air* of a British farmer's home. I send with this some letters of Mr. Mechi, and drawings of his buildings, on which he has expended great sums. He is a practical man, and I think you will find matter of much interest in the letters.

I should not omit to mention that the potatoe crop here, as well as with us, has been latterly subject to disease, called the "dry rot," attributable by many to the heating of potatoes in the heap, but vulgarly, and I think erroneously, attributed to the use of guano.

Respectfully yours,

D. G. Mitchell.

LETTER FROM MR. HORSFORD—No. I.

By the last arrival from Havre, we received the following letter from our friend Prof. Horsford, whose departure for the University of Giessen, we noticed in our November number. Though dated at London, the letter was finished at Giessen, where Mr. H. arrived on the 25th Nov.

London, Nov. 13, 1844.

Mr. L. Tucker—The Packet Ship Switzerland reached the Bill of Portland, Wednesday evening, the 6th inst. after an unusually long eastward passage of twenty seven days. The gale, which proved so destructive to vessels in the British Channel, and along the coast, came upon us, the Saturday and Sunday previous; but having abundant sea-room and a staunch ship, it was the occasion only of a fine display of seamanship among the officers and crew.

The passengers were landed in a pilot boat at Weymouth, one of the favorite watering places of the nobility; and early the succeeding morning we were greeted with English scenery and English life. I shall attempt no expression of the feelings with which I looked upon every thing, so unlike what I had been accustomed to; for I should fail, as others have, in writing what I have read—to give a just idea fully appreciable by an American, and besides, at the best, it would be a more than thrice told tale. Every thing seems constructed with the motto "to last;" every thing seems so old and established; and every body seems so happy and contented, that one from the young, enterprising, progressing, anxious New World, feels bewildered in the contemplation of objects about him.

The "Bill" of Portland is a promontory of rock jutting two or three miles, I should judge, into the channel. It is so called from its resemblance to the bill of a duck, when seen from some distance at sea. Weymouth rests upon the outcrop of rocks which underlie the chalk basin; and the inhabitants have taken advantage of their location to erect a great number of fine blocks of buildings overlooking the bay and harbor. In front of some of these edifices are garden and court-yard walls of irregularly shaped sandstone blocks, to which a very fine effect is imparted by laying them up in a striped mortar; or perhaps I should say grooved mortar. After looking some time at the structure, I came to the conclusion that in the creation of the wall, two pots of mortar were employed, one of which was readily decomposable, or suffered ready disintegration from atmospheric exposure, while the other did not. Between each two layers of stone there were three layers of mortar, the middle one of them being of the first kind. Upon this supposition I could see, how in the progress of a few months after the erection of the wall, the fine grooved effect might have been produced.

From Weymouth we proceeded by "The Magnet," an English coach, over the undulations of the chalk basin to Salisbury, five and forty miles. The road was of flint and graded with such care, that the gallop or trot of the horses was uninterrupted through each stage. As we drove from Weymouth, there was nothing in English agriculture or husbandry of any description particularly commending itself to my attention. The soil upon the chalk was so shallow, as long since to have been quite exhausted. Extensive grass plains, mottled here and there with patches of furze, and flocks of South Downs, were frequently in view.

No fences, and very indifferent hedges, except in the immediate vicinity of villages, were seen, separating larger or smaller tracts of land. Somewhere on our way we passed the county line of Wilkshire, altogether unique in character—a ridge of earth succeeded by a ditch. The height of the ridge must originally have been some twelve or fifteen feet.

In the vicinity of this ridge, and scattered all along the road from Weymouth to Salisbury, and abounding especially in the vicinity of Stone Henge, are circular mounds and amphitheatres like those attributed to an unknown race, before the Indians, in America. I learned one fact here, which, taken in connection with the correspondence form, may serve to aid antiquarian investigations. It is, that the same kind of flint arrow-heads or arrow-points

—alike in form and material, are found in these mounds that are found in Western New-York. Now there have, as yet, no chalk beds been discovered in the United States, and of course, no flints. Indeed, there have to my knowledge, none been discovered in North America. This being true, and the arrow-points being composed of a material found abundantly in England, where, also, similar arrow-points obviously wrought from the chalk cliffs near, are also found, it furnishes an interesting fact for the antiquarian, one that without much effort of credulity, would induce the conjecture that these two systems of mounds and two suits of arrow-heads had a common origin.

The plowing was all along very beautiful, the "lands" having been laid out with such mathematical exactness, and the furrows cut of such uniform width; at the distance of the coach, however, the plows seemed less skillfully constructed than some I had seen. The holding of a plow was shared between a pair of wheels, and a holder proper—while the driving of three horses or one horse and a pair of oxen, was entrusted to two other persons; in some instances to but one. Sowing by drills had given to the newly sprouting grain, the finest effect. The crops of turneps were tolerably good in some instances, but very rarely abundant. I was told in view of this fact, and some others of the same description, that our tour lay through a very indifferent specimen of English agriculture. This I found emphatically true, as we approached London, where the surrounding country is on the Surrey side, for a distance of some twenty miles, a vast, magnificent garden.

The effects of landscape gardening were illustrated in two or three instances on our way, which were exceedingly beautiful. Plats of larch and fir, the one now brilliant yellow, and the other bright green, cover a hill side here, while at the conclusion of a lawn, there are tall, slender oaks of uniform height, and equal intervals between, encased to the branches with ivy; and here again are mounds of shrubbery of every kind of branch and foliage, so disposed as to fill the eye, when viewed from the mansion at the foot of the valley yonder, while, there again, is a lone evergreen spreading its limbs in freedom on every side.

Salisbury Plain, is a series of broad mounds and gently sloping vales, as much like the surface of country between Albany and Schenectady, as any I have seen, if those sand plains were freed of their shrubbery. It is a great grass field, with here and there scanty remains of hedges. It appears to me a region, the soil of which is no longer productive, and which is therefore occupied only by shepherds and their flocks. Some account of Stone Henge, that most wonderful Druidical relic, and the conclusion of my journey to London, will constitute the introduction to my next letter.

Respectfully yours,
E. N. Horsford.

Foot Rot.—C. W. S. in the English Agricultural Gazette, directs that the hoof be cut away sufficiently at the lower part to permit the escape of any matter that may be confined, and that the diseased part be touched, by means of a feather, with a little hydrocloric acid, which may be repeated if any fungous flesh grows on the part; if otherwise, the sore may be dressed daily with a powder composed of equal parts of sulphate of copper, alum, fine charcoal, and Armenian bole. The sheep must be kept in a clean dry place—dirt and moisture are prejudicial.

To Sweeten Rancid Butter.—A foreigner, says an agriculturist in the neighborhood of Brussels, has succeeded in removing the bad smell and disagreeable taste of rancid butter, by mixing and beating with it chloride of lime. The operation is said to consist in beating the butter with a sufficient quantity of water, into which is put 25 to 30 drops of chloride to 2 pounds of butter. After being mixed till all parts are in contact with the water, it is left for an hour or two, then withdrawn and washed anew in fresh water.

☞ Putting hot water, say a couple of gallons, into a churn, and shaking it about a while before using it, will, it is said, make the butter "come" in a short time.

VERMIN IN ANIMALS.

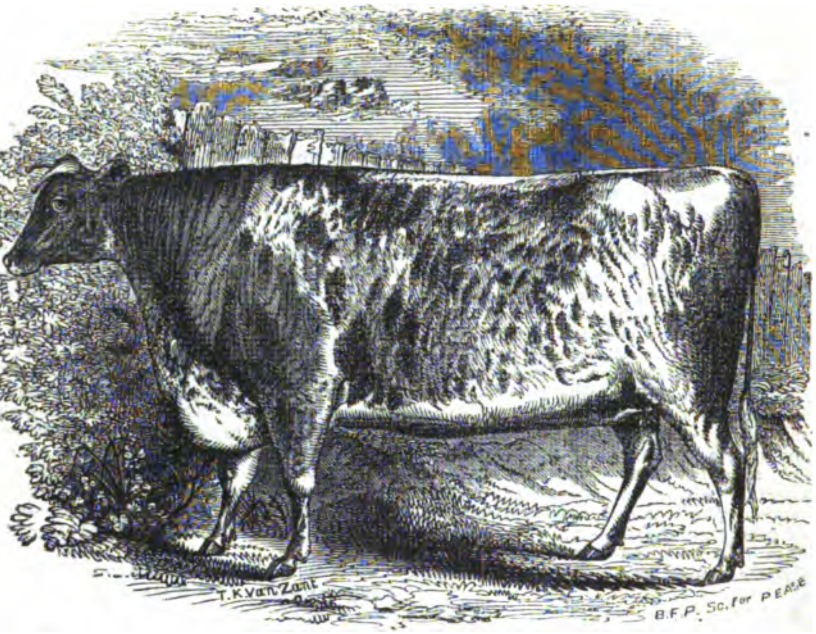
From man, down to the inferior tribes of animals, such as bees, grasshoppers and beetles, almost every species has its peculiar parasite. Each kind of domestic animals, including poultry of all sorts, is attacked by one or more species. We have heard it said that lice on cattle and ticks on sheep, "*don't do much hurt*," and from the myriads of those insects which are permitted to live, we might suppose some such idea was quite common. How many lice or ticks it takes to consume an ounce of blood in a given time, we don't know that any body has ever ascertained; but that they do actually support themselves from the bodies of the animals to which they are attached, is certain. Their beaks or suckers are almost always inserted in the skin, and their bodies are filled nearly to bursting with animal juices. By their attacks, the vermin keep the animals in a state of constant fretfulness and irritation; the consequence of all which, is, the stock become poor and weak. In endeavoring to relieve themselves, by biting and rubbing, from the intolerable itching which ticks occasion, we have frequently known sheep to pull out and and lose nearly all their wool, and lice induce cattle to rub off much of their hair. Exposed to storms and inclement weather, in this naked and feeble condition, both cattle and sheep often contract diseases which carry them off—the owner, perhaps, satisfying himself by attributing the loss to *bad luck*.

The application of various substances will kill vermin. Tobacco-water, strong soap-suds, spirits of turpentine, oil, or any kind of grease, will kill them if brought in contact with their bodies. Preparations of mercury, (such as unguentum,) by affecting the blood and being thus carried through all parts of the system, are more effective; but their use is not unattended with danger. Salivation is sometimes produced, and if the animal while under its operation is exposed to cold and wet, its death is frequently the consequence. Sulphur also operates through the blood, and is a useful and perhaps harmless application. Strong decoctions of tobacco are sometimes injurious by making the animals sick and weak for a time.

In the winter season, when the animals are clothed with a full coat of hair or wool, the entire destruction of vermin is attended with some difficulty. If cattle are kept under cover, or are *fully protected* in bad weather, we see no objections to a moderate use of unguentum. We have often used it under such circumstances, with perfect safety. For stock that are kept out of doors, or are much exposed, we should prefer whale oil mixed with spirits of turpentine.

The best mode of killing sheep ticks, when the wool is long, is by fumugation with tobacco. Take a cannister, of copper or sheet iron, made at one end to fit the nose of a bellows, and having at the other end a small pipe for the escape of the smoke. Fill the cannister with tobacco, put in a coal of fire, and fasten the cannister to the bellows-pipe, around which there should be wrapped some damp tow, to make it fit tight, and commence operations. It takes two men, or a man and a boy, to work to good advantage—one to hold the sheep and open the wool, and the other to blow in the smoke with the bellows. The wool should be opened in lines or furrows around the body from six to eight inches apart. As the wool is opened the pipe of the cannister should be applied close to the skin, the wool immediately closed around, and slightly compressed at the surface with the hands, and at the same time a puff given with the bellows. This will keep the smoke close to the animal's body. The work may be done very expeditiously, and nearly every tick will be killed.

This is the best course when sheep get over-run with ticks in the winter season ; but if the *lambs* are properly attended to, after the sheep are sheared, no necessity for smoking will ever occur. Three or four days after shearing, the ticks being deprived of protection on the sheep, resort to the lambs, whose wool is then generally started enough to give the vermin sufficient covering. If, at this time, the lambs are dipped in a decoction of tobacco, the ticks may be exterminated at once. The decoction need not be so strong as to hurt the lambs.



IMPROVED SHORT HORNED DURHAM HEIFER ESTERVILLE.—(Fig. 16.)

Esterville, the property of E. P. Prentice of Mount Hope, received the first prize for two year old heifers at the Cattle Show of the N. Y. State Ag. Society at Poughkeepsie, 1844. She was sired in England by the Daniel O'Connell, (3557)—dam, Esterville, by Sir Alfred, (6469)—g. d. Amethyst, by Prince of Northumberland, (4826)—g. g. d. Amazon, by Crusader, (934)—g. g. g. d. Amazon, by Sultan, (1485)—g. g. g. g. d. Belona, by Mars, (411)—g. g. g. g. g. d. Rolla, by North Star, (458) own brother to Comet, sold for £1,000. Sir Alfred was, in 1840, sold to the King of the French.

CHOICE APPLES.

Description of the "Northern Spy" Apple, and a few other choice varieties from Western New-York. By Ellwanger & Barry.

No. 1. **Northern Spy.**—This fruit is above the medium size, fair specimens measuring over 3½ inches in diameter. *Form* somewhat conical, regular and slightly ribbed. *Stalk* of medium thickness, ¾ of an inch long, inserted in a large, deep and regular cavity. *Calyx* generally about half closed, deeply set in a large regular basin. *Skin* smooth, shining and thin, of a dark red color with crimson streaks, dotted with pale yellow on the sunny side—pale green, changing to a rich yellow when ripe, in the shade—those that are fully exposed to the sun with a good aspect, are completely covered with a beautiful deep pink, with purple streaks and minute yellowish specks. *Flesh* yellowish white, breaking and tender, very juicy and fine flavored, with just enough acidity to suit almost any taste. It possesses a strong and agreeable perfume, quite peculiar to it; by placing your head over an open barrel of the fruit, you can at once distinguish them, in the dark, from any other. It is fit for use from December till June. We sent a few of them to the Massachusetts Horticultural Society on the 23d of May last as sound and as perfect in beauty and flavor as it was possible for them to be; in this respect, they fully equal, if not surpass, any apple we know of. The tree is of rapid, upright and beautiful growth, and attains a large size. The young wood is of a reddish brown color, quite glossy, and covered with whitish dots. Young trees bear immense crops, and moderate ones, alternately; as they advance in age, they become more regular.

We are of the opinion, and so are all who are familiar with the fruit, that it is one of the most valuable kinds we possess, either of native or foreign origin. Its superior qualities as a table fruit, together with the great length of time that it is in use, render it peculiarly desirable for limited orchards and fruit gardens; and it cannot be too highly recommended to persons embarking in the culture of fruit for distant or foreign markets; some 10 or 12 barrels have been brought into our market the past fall, and were promptly sold at $2.25 per barrel, while ordinary kinds were selling for $1. In the spring they sell readily for $1.50 per bushel, even in our abundant market.

The history of this fruit, as far as known, is this: The orchard in which the original tree stood, (it is now dead) the property of the late Oliver Chapin of Bloomfield, was planted, as we are informed, when the country was first settled, over 40 years ago; the trees were all seedlings, and when they came into a bearing state, those that were bad were grafted; those considered good were left in their natural state. This variety was of the latter class. Some 14 years ago, a person came into the neighborhood who practiced grafting in the spring, around the country. He, in the course of his researches, discovered the good qualities of this fruit, and gave it the name it now bears; perceiving that the old tree was in a decaying condition, he dug up a number of suckers that had grown up around it, and sold them to a few persons in the vicinity. One man who raises fruit for market, purchased some of them, and they bore for the first time, three years ago, a quantity of magnificent apples, which he carried to market, and thus the fruit was introduced to notice. We have taken particular pains to examine personally, all the particulars, and we are fully satisfied of its being a seedling variety. We have noticed suckers growing up around the young trees we have alluded to, and the appearance of the wood, in every point, is identical with the tree.

No. 2. **Norton's Melon Apple.**—This is an apple entirely new to us; and which, we strongly suspect, is a "native;" we found it in the same neighborhood where the "Spy" originated. We have been informed that it has been cultivated in that vicinity for a great number of years, but we could not trace out its origin satisfactorily. It is a great bearer, and is esteemed in Bloomfield, one of the best table apples they have for fall and winter use; to our taste it is a *first rate* fruit, and eminently worthy of cultivation. It is commonly called the "Melon Apple," from its excessive juiciness; we have added "Norton's" to designate it more particularly, having received it from a gentleman of that name. It is about medium size. *Form* inclining to conical, slightly ribbed. *Stem* one-half to three-quarters of an inch in length in a pretty deep hollow. *Calyx* usually closed and set in a smooth regular basin of considerable depth. *Skin* smooth and glossy, and exceedingly thin, of a light red color, with stripes and blotches of crimson next the sun, and of a pale delicate flesh color in the shade. *Flesh* white as snow, tender, breaking, fine flavored and sprightly; juice very abundant, as much so as in a luscious peach. In use from November to April.

No. 3. **Detroit Apple**—(*Black Apple.*)—This fruit is partially known and cultivated in several sections of the country; we do not recollect having seen a description of it particularly, or any account of its origin. It is supposed by some to have been introduced to the neighborhood of Detroit by the French, and thence distributed to other places. We have had many inquiries made recently, respecting it, and are therfore induced to give the following description from samples now before us, grown here.

Fruit rather above medium size, three to three and a half inches in diameter. *Form* round, very regular and flattened. *Stalk* three-quarters of an inch long in a deep cavity. *Calyx* closed, and set in a hollow of moderate depth, and considerably wrinkled. *Skin* rather thick, smooth and shining, of bright scarlet, changing to dark purple, marbled and dotted with yellow in the sun—dull red, with an occasional blotch of green in the shade. *Flesh* white, crisp, very juicy, agreeable flavor and perfume; those that are exposed to the full glare of the sun, are tinged inside with red almost to the core. This apple is highly prized with us. It is as yet, however, very scarce, and seldom seen in market. But we have reason to believe it will soon be widely disseminated as it deserves to be. It is in use from Nov. till March. There is an apple cultivated in this vicinity called the "Jersey Blue," very much resembling the "Detroit;" and we recollect having seen one quite similar, exhibited by the Messrs. Downing in 1842, at Albany, called "Grand Sachem."

No. 4. **Blush Apple.**—This apple we recently found in Ontario county, where it is held in the highest estimation. We can say nothing with regard to its origin. It is not known by any one we have seen, how it came into the neighborhood; at any rate, it is but very little known or cultivated, and is certainly of superior excellence. It is of large size, and when fully ripe, resembling considerably in form and appearance, the "Sweet Bough." *Stem* very thick, fleshy and short, set in a somewhat irregular cavity of moderate depth. *Calyx* quite open, in a smooth regular basin of considerable depth. *Skin* smooth and glossy, of a beautiful blush in the sunny side; green, changing to yellow, when ripe in the shade. *Flesh* greenish white, tender, breaking, juicy and pleasantly acid. Fit for use from October till March.

No. 5. **Wax Apple.**—This apple is cultivated by Judge Strong of Rochester. He does not know where it came from; and his family, who prize it very highly as a dessert fruit, on account of its fine keeping qualities and beauty, have given it the name of "Wax Apple," from its clear, delicate, waxlike appearance. *Size* medium. *Form* oblong. *Stalk* one-half to three-quarters of an inch long, inserted in a minute hollow, nearly even with the surface of the fruit. *Calyx* closed, quite prominent, even with the surface. *Skin* smooth and glossy, bright red, with small yellow dots, on the sunny side; parting abruptly from a pale yellow on the shaded side, similar to the Lady Apple. *Flesh* white, juicy, and of agreeable flavor; keeps till June; retains its beauty and flavor admirably.

King Apple.—One of your correspondents inquires where grafts of this apple can be obtained; we would state for his information, that they can be had in Rochester; we have a large number of the trees in our nursery, propagated from fine bearing trees of Wm. Pitkin, Esq., who cultivates this fruit extensively. He thinks it unsurpassed. He sent all his crop of the past year to New-York city, we believe. It is thus described in the "New Genesee Farmer," vol. 3, page 57. "*Fruit* large or middle sized, roundish or conical, inclining to flat. *Eye* small, closed in a narrow, shallow basin. *Stalk* an inch long, set rather deep, in a wide cavity. *Skin* a light yellow on the shaded side, streaked or blotched with red next the sun, and where much exposed, passing into a full red, sparsely marked with brown dots near the stalk, but more thickly dotted near the eye. *Flesh* whitish yellow, sub-acid, but more sweet than tart; of a fine flavor."

Mount Hope Garden and Nursery, Rochester, Dec. 1844.

MANAGEMENT OF BREEDING EWES AND LAMBS.

Mr. Tucker—Your private request that I should give you my experience in the management of breeding ewes, has been some time delayed. A full account would require too long a chapter for your paper. The accompanying notes are hastily and briefly given.

The nature and combinations of the various points and parts of the ram, should of course be well considered, and impressed on the mind of the breeder, in order that he may always rear and preserve those animals to the greatest advantage, paying the strictest attention to build and constitution, and to the preservation of the quantity and quality of the fleece.

It is very hard to find and retain all of the following qualities in one ram, or a stock of sheep, viz: Round build, wide chest, large belly, round and full behind, wide tail near the body, large but short legs, long body, short back, large but short neck; wool fine, very thick, and very long and oily; wool thick on the belly; the inner part of the legs mostly covered, and run quite even from the shoulder to the ham, free from jarr or long coarse hairs, of good length and thickness on the outer part of the fore and hind legs down to the knees and gambrel joints; short head, but wide between the eyes, which should be full and bright. In my judgment, a stock getter of this description is worth his weight in silver to any breeder that keeps one hundred ewes.

There is a great difference in the disposition of the merino race. Some of them are naturally more tame and docile than others. It is quite important to obtain a stock getter of a gentle and quiet disposition. An improved disposition indicates an aptitude to convert their food into flesh or fat. A good disposition is very meritorious in the breeding of ewes as well as wethers; those most gentle are in the best state at lambing time. There are several circumstances which are supposed to form or contribute to this goodness of disposition in these animals. They must be well bred, or come from such as have good properties; breeding in-and-in, or in the same line, greatly contributes to form disposition. Ewes should be carefully selected before put to breeding. Choose such as are the most perfect, and that possess in the highest degree those properties or qualities which are wanted. If the ewes produce wool of a short staple, breed from a buck of a different character. A judicious selection as regards build, should also be attended to at the time they are turned to the ram, if it has not been done before.

Ewes of good age, and the best milkers, should be selected first for the ram, leaving the younger ones to be placed with him about ten days later. Sixty ewes are enough for a young ram, and 150 to 200 may be put to an older one. It is best to throw out the ewes as fast as they are tupped. The ram should be grained some time previous and during service. Early lambing is mostly advantageous where the circumstances of the farm will admit of it. In Vermont, the month of May is considered the best month for the lambs to drop. Ewes should have the wool well clipped away from the udders previous to the dropping of the lambs, and they will rear their lambs better to shear them as early in June as practicable, according to the weather. It has a tendency to dry up the milk, carrying their fleeces into the hot days. Ewes should not be allowed to range in long pastures while the lambs are young; forty at this season is as many as should be kept together, and if the flock is less, it would be better for various reasons. Ewes should be examined early in the morning, and see that the lambs just dropped, are capable of sucking, which is commonly readily decided by the distention of the belly. When the lamb becomes chilled, it may be resuscitated by placing it in warm water, and next, rub it with cloths till dry; give him no milk until he calls for it, and then he may have all that nature requires without injury; milk from a farrow cow is not suitable to feed young lambs. Ewes may give too little milk, especially when they drop their lambs early in the spring. In such cases, it well pays to aid the lambs by milk fed from a bottle a few days. Their milk may be greatly increased by feeding them turneps, potatoes or similar green food. Given to those that drop their lambs early, the growth of the lambs is greatly promoted, which is of much future importance, for when they are stunted at this early period of their existence, they never turn out so well afterward. With the root crops may be fed preserved after-grass or rowen; oats, corn or oil meal may be made use of for the winter food of breeding ewes. Red and white clover are of much consequence as spring food for breeding ewes; no sort of pinching sheep stock answers any good purpose; food in abundance should always be provided, and good water should constantly be at hand. Those ewes that first take the ram, it is profitable to mark off, that they may be early selected and extra care taken with the early lambs.

Merino ewes in good order are apt to give a plenty of milk, and will take care of their lambs. In case she does not own her lambs, shut her into a small pen, and make her stand to suckle the lamb a few times, which will generally bring her to natural affection. Some recommend tying up the ewe and let a dog bark at them, which frightens them into obedience and affection for their offspring.

It sometimes happens that ewes with an abundance of milk lose their lambs. It may be profitable to provide her with another that does not fare as well; to effect this, place the skin from the dead lamb over the body of the live one, and the unfortunate mother will own it. The skin need not remain on more than a day or two.

As soon as a lamb becomes smart, his tail should be taken off; the best way is to turn the animal on his back and hold his hind legs. The operator takes hold of the tail with the left hand, but is cautious not to pull it. Then place the knife across the tail about one inch from the body, near the intersection of the two cords with the tail; then with the edge of the knife, shove up the skin about one-third of an inch; when the edge strikes between the joint, immediately cut it off. By this process, the skin will project beyond the bone, and of course heal much sooner. By cutting off the tail as the lamb stands on his feet, the wool prevents the cutting readily, and by pulling the tail as is usual, it leaves the bone to project beyond the skin, and thus prevents the healing some days. The ewe lambs should be cut shorter than the wethers.

In respect to the business of castrating or gelding the lambs, it should be performed early, as there is less danger of too much inflammation taking place. The pouch should be taken off pretty close to the body, and when the operation is attended to early, there is no need of any application to the wound.

The lambs should be immersed in a decoction of tobacco water, say five pounds of good tobacco steeped in a sufficient quantity to dip one hundred. This should be attended to about one week after the ewes are clipped, to destroy all the ticks which have by this time found shelter in the lamb's fleece.

Three months and a half or four months is as long as is profitable for the lamb to draw milk from the ewe. Turn them into fresh and sweet feed reserved for the purpose, either pasture or meadow, at a distance from the ewes, out of hearing; if possible, there should be no water in the lot, as they may over satiate and injure themselves. In order that the young stock suffer no check, they should have good feed and a plenty of it. The milk should be drawn from the ewes within four or five days after weaning, to prevent any bad consequence by the udder swelling

The best way to get a smart and even lot of lambs is to put out the buck *only in the day time* with the ewes. I sometimes put out the bucks two or three hours each day with the flock, stabling them the remaining part of the time.

The method of turning a number of rams into one flock is highly exceptionable, as tending to prevent the main object and injure both sexes.

Sheep are very sympathetic animals, and have more to do in making their progeny than any other species. Therefore to insure the lamb to be struck off after the fashion of the sire, he should be placed with them in the day time only.

By placing ewes in full vigor with rams deficient in constitution, you will produce more females than males. To effect the contrary, let your rams be of full age, and robust, placed with old or young ewes that are not in full maturity, and bucks will be multiplied more than ewes.

Merino ewes should not be allowed to breed until the third year. Their time of gestation is about five months, and are able to produce three births within two years. Those that are backward in taking the ram, the best means to be employed, are those of good stimulating keep.

Covered sheep folds are often of very great advantage in securing and protecting both ewes and their lambs. Lambs should by no means be winter stocked with the ewes; being weaker, they cannot have an equal chance at the food.

In order to guard against the injury of the sheep fly, which is more troublesome to breeding ewes, many breeders in this vicinity, make use of Scotch snuff, thrown up the nose by a common syringe; a pound of snuff is mixed with eight quarts of water; one-half gill is sufficient for each nostril. It requires two hands to operate expeditiously. The head of the sheep partly enters a frame constructed for that purpose, and secured fast to receive the injection. The time selected for this operation, is the fall season. Those sheep that are affected with the grub in the head, occasioned by this fly, may be sought out during the winter and spring months. They exhibit a general stupidity and dullness; stand rather drooping. The viscid matter that flows from the nose is sometimes of a bloody color. Good keeping during the summer months is the greatest preventive for this and most diseases that trouble the sheep family.

Respectfully yours, S. W. Jewett.

Weybridge, Vt., Dec. 7, 1844.

ROT IN THE POTATOE.

I read in your December number, page 371, with much interest, the letter of Prof. Jackson on the disease in the potatoe. It is of much importance that all the facts in relation to the subject should be correctly stated; I therefore trouble you with this note, to correct one error in the Professor's letter. He says—"No balls are formed on any of the diseased plants." This is undoubtedly true of those that he examined, but on my plants many *were* formed.

I do not think that the disease is attributable to the honey dew exclusively, because we have those dews very frequently, but they have never affected potatoe vines before. Perhaps some disease existing in the growing potatoes *predisposed* them to be affected by the honey dew.

There are two facts which I observed in my field, which I have not seen noticed in your paper. The first is, that the disease was confined to the tubers nearest to the surface; those lying deep were unaffected. The second is, that the rotten potatoes were full of long white worms. I saw nothing which looked like fungi, with the naked eye, but it did not occur to me to examine them with a microscope. The odor was intolerably fœtid.

N. N. D.

Land being capable of greater cultivation, and great quantities lying entirely uncultivated, the idea of abundancy of labor is erroneous.

The most profitable farming is the highest and best farming.

FOOD OF PLANTS—SALT FOR POTATOES.

	WHEAT. 25 bu. per acre.			BARLEY. 40 bu. per acre.			OATS. 70 bu. per. acre.			RYE. 25 bu. per acre.			PEAS.. 32 bu. per acre.			POTATOES. 332 bu. per acre.		
	Grain.	Straw.	Total.	Grain.	Straw.	Total.	Grain.	Straw.	Total.	Grain.	Straw.	Total.	Grain.	Straw.	Total.	Roots.	Tops.	Total.
Potash, ...	3.3	0.6	3.9	5.6	4.5	10.1	3.7	32.7	36.4	8.0	1.3	14.3	16.2	12.2	28.4	80.5	327.3	407.8
Soda, ...	3.5	0.9	4.4	5.8	1.1	6.9	3.3		3.3		5.0		14.7		14.7	46.6	0.3	46.9
Lime, ...	1.5	7.2	8.7	2.1	12.9	15.0	2.5	5.7	8.2	1.8	7.3	9.1	1.2	163.2	164.4	6.6	517.0	523.6
Magnesia, ...	1.5	1.0	2.5	3.6	1.8	5.4	1.7	0.8	2.5	0.7	0.5	1.2	2.7	20.2	22.9	6.5	70.0	76.5
Alumina, ...	0.4	2.7	3.1	0.5	3.4	3.9	0.3	0.2	0.5	0.4	1.0	2.0	0.4	3.6	4.0	1.0	0.2	1.2
Ox. of iron,.					0.3	0.3	1.0		1.0	0.6			0.2	1.2	1.4	0.6	0.8	1.4
Ox. manga..					0.5	0.5				0.5		0.5		0.5	0.5			
Silicia, ...	6.0	86.0	92.0	23.6	90.0	113.6	50.0	172.0	222.0	2.5	92.0	94.5	8.2	60.0	68.2	1.7	196.0	197.7
Sulph. acid,.	0.8	1.0	1.8	1.2	2.8	4.0	0.9	3.0	3.9	0.4	7.0	7.4	1.0	20.2	21.2	10.8	16.8	27.6
Phos. acid,..	0.6	5.0	5.6	4.2	3.7	7.9	1.5	0.5	2.0	0.7	2.0	2.7	3.8	14.2	18.0	8.0	78.3	86.3
Chlorine, ...	0.2	0.9	1.1	0.4	1.5	1.9	0.2	0.2	0.4	0.1	0.7	0.8	0.8	0.3	1.1	3.2	2.0	5.2

L. TUCKER, Esq.—Above is a table, by which you may at a glance, ascertain what materials are requisite for the production of such crops as are generally cultivated in this region of country. It is condensed mostly from "Prof. Johnston's Agricultural Lectures." His Analysis gives the contents in a hundred or thousand parts; but in order to make it more convenient for reference, I have collected the facts into one table, and adapted them, according to his estimates, to a single acre, giving the amount of each requisite material in pounds and its decimal parts.

It will be seen by the above that the grain crops require but a small quantity of material for perfecting them, beside the vegetable matter with which the soil should abound, which is doubtless the only permanent source from whence plants derive their carbon—the most, indeed the whole of this material may be found in four substances, very common, and within the reach of every one, namely: ashes, salt, lime and plaster.

I will mention one experiment with salt, which it will be seen by reference to the above, is very essential to the growth of the potatoe. Three years ago I had a field in excellent heart, planted with potatoes, which gave an excellent crop, averaging three hundred bushels per acre. The next year it happened that it became necessary to plant the same field again with potatoes; but I feared lest the worms should destroy the crop, as they appeared quite numerous at the first digging; but I proposed to remedy this by sowing salt, which I did about a fortnight before planting, at the rate of a barrel per acre. The salt I supposed would kill the worms, nor did I calculate upon any other effect from it; but it did not kill the vermin, for the ground was as thickly infested by them as in the previous year; and upon digging the potatoes, the crop exceeded my expectations, and to my surprise gave an average of 420 bushels per acre over the field. The potatoe being a very exhausting crop, I did not then know why the second crop should be the largest of the two; but since I have seen an analysis of the potatoe and of salt, the wonder is easily explained, and I am constrained to believe that had I put on, beside the salt, 20 bushels of unleached ashes per acre, the crop would have been increased to 600 bushels per acre.

Salt is not so destructive of vegetation as most people imagine.. From some small experiments that I have made, I should judge that it would take sixty bushels per acre, of our common fine salt, before vegetation would be materially injured. In conclusion, allow me to recommend Professor Johnston's Agricultural Lectures to every farmer, as a book particularly interesting to him, and worthy of a place in his library.

P. S. Would the potash in leaves and twigs be available to plants, without their being first burned, and in what time?

As the cause of the potatoe rot has created considerable discussion of late, I will state a fact that may not be altogether unworthy of notice. I had a new variety raised from the potatoe ball, two years ago, that was worse affected than many of the old varieties. Yours, &c.

La Fayette, Onon. Co., Dec. 1844. E. V. W. DOX.

HUSSEY'S REAPING MACHINE.

MR. EDITOR—I believe that if there was a more general correspondence between the farming community through the medium of agricultural journals, and their experience more generally imparted to each other, with regard to seeds, their qualities, varieties, &c., we should be much benefited thereby. There is nothing perhaps, from which greater results would accrue, than a general information as to the constant improvement in tools and machinery generally applicable to agricultural operations. We here abouts, see in some of the northern papers, about once a year, that they have had a plowing match, and that some maker receives the premium for his plow, possessing many advantages over others. This is generally the last we hear of it.

Of all the agricultural implements which have come under my notice for some years, I think there is none more worthy of special notice than Hussey's Grain Reaping Machine. I have used one for two years, and am satisfied that it is competent to perform what Mr. Hussey sets forth. Since his improvement in adding the fore wheels, it can cut twenty acres of wheat in a day, and the work is perfectly done. Another great recommendation is, that the machine is permanent in all its parts. I have used mine for two years, without having previously prepared the ground by removing stone and other obstacles, and have broken no part, and find nothing giving way. Many of our farmers were prevented last year from procuring machines from Mr. Hussey in consequence of understanding that some of McCormick's would be sent to the county on trial. They were sent, and as readily taken on trial. I did not see them work, but inquired of the gentlemen who used them very particularly as to their operation, feeling interested myself in the result of the trial, and was in every case informed that McCormick's were not comparable with Hussey's. One very serious objection to McCormick's was, that the hand who pushed off the grain, follows the machine on foot; necessarily the machine must go very slow; and then, from the manner in which the grain falls on the platform, it is much tangled when it is pulled off in the sheaf. This objection does not apply to Hussey's; the raker rides on the machine, and can with ease do very good work. I am ignorant whether it has been tried in your fine Genesee country. If not, it should be next harvest, and I think without doubt, it would give general satisfaction.

Respectfully yours, L. W. WASHINGTON.

Halltown, Jefferson Co., Va., Dec. 19, 1844.

A beneficent Providence has so ordered the affairs of this world that we cannot do good to others without directly or indirectly doing good to ourselves.

THE "YELLOWS" IN PEACH TREES.

MR. TUCKER: SIR—About the year 1795, peach trees, in the neighborhood of Philadelphia, began to die without any apparent cause. Soon after, they began to perish in like manner more and more remotely from that city. By 1810, few peach trees were left alive in the State of New-Jersey. They began to die around New-York about 1801, and in the State of Connecticut, about 1815. The unknown cause of this strange death of trees, before considered as hardy as other fruit trees, has been termed the "*Yellows;*" and has been called a *disease*, in analogy to those epidemics which at times lay waste human life. It is, perhaps, the first and only instance of any affection in the *vegetable* kingdom, that can be called with propriety, *disease*. It has all the appearance of being constitutional; bearing no resemblance to the decline and decay caused by bad soil, unsuitable temperature, or local injuries.

Hitherto, all efforts to discover the cause of this fatal malady, have been made without success. What produces the "Yellows," is as much unknown as what produces the cholera. One circumstance has doubtless prevented a very general and thorough search for the cause of the Yellows. Every where we have occasionally seen an insect (Ægeria excitiosa) that eats into the bark of peach trees, near the surface of the ground. Whenever a person discovers this insect at work, he imputes the death of his trees to that. Most persons stop here, merely looking about for some mode of keeping out or destroying the peach worm. Now the effects of the Yellows are as different from those of the boring of the peach worm, as the small pox is different from the cut of a knife. If every body could be made aware of this difference, research would be universally awakened, and receive a direction that might lead to the most valuable results. A great step will be gained, if a hundred-thousand readers of the "Cultivator" would all understand alike what is meant by the term *Yellows* in peach trees; would all understand distinctly, that it does *not* mean *peach worm*. For this reason I deem it of great importance to present in the Cultivator a clear, unmistakeable description of this fatal disease.

There are two marks or symptoms, by which the presence of the disease is indicated. One is, the shooting out from the body or limbs of the tree of very small, slender shoots, about the size of a hen's quill. The leaves upon these shoots are commonly destitute of green color, as if blanched, or as if grown in a dark cellar; and like the shoots which bear them, are of diminutive growth—rarely exceeding an inch in length. These shoots do not usually start from the common, visible buds at the points where the leaves join the stem, but from unseen latent buds in the bark of the trunk or large branches. The other symptom is, the ripening of the fruit two to four weeks before its natural season of maturity. Most generally also, the fruit, whatever be its natural color, is more or less spotted with purplish red specks. If shoots, such as are above described, appear upon a tree, or without them, if the fruit upon any part of it (not wormy) ripens before the proper time, it may be certainly known that the tree has the Yellows.

These are not the only marks or symptoms of the disease; but they are those which are the most readily discovered. The ordinary leaves of the tree, or at least those upon the diseased portion of it, commonly undergo a slight change of color. Instead of a bright glossy green, they take on a dull yellowish tinge. The wood also, when the disease is considerably advanced, becomes unelastic, so that its branches, when moved by the wind, instead of the graceful waving of health, have a stiff, jerking motion. These two last mentioned symptoms will not readily be seen but by a practiced eye.

What I have further to say concerning this disease, may most conveniently be stated in separate sections.

Sec. 1. The slender shoots spoken of above, do not appear to ripen their wood perfectly. They continue in a great degree herbaceous till frost comes. For this reason, or because no buds are formed on them, they perish the succeeding winter.

Sec. 2. The fruit may exhibit marks of disease, when the other symptom (slender shoots) is not discoverable. But, on the other hand, I have never seen the slender shoots on any part of the tree, without the fruit, if there was any, being affected.

Sec. 3. The fruit, the first season of attack, usually grows to its proper size. The second season, it is uniformly small—not more than a half or a quarter of its proper size.

Sec. 4. Whatever be the natural color of the fruit, red, yellow, white or green, it is more or less, when diseased, colored with purplish red; generally in specks or coarse dots. The flesh, quite to the stone, is often colored, and most deeply around the stone. By the colored specks, a person may easily distinguish by the eye, diseased from healthy fruit, as it is offered in market.

Sec. 5. The taste of diseased fruit cannot be exactly described, for want of appropriate words. The word insipid almost describes it. There is an absence of all agreeable flavor, and there is not much that is disagreeble. A few sorts retain, in spite of disease, some of their exquisite peach flavor.

Sec. 6. In the first summer of disease, it is not always that the whole tree appears affected. The slender shoots may show themselves on one branch only, the rest of the tree having every appearance of health. In like manner, the fruit upon one branch may ripen four weeks too soon, upon another two weeks too soon, and upon the rest of the tree at the natural time. The second season, all the fruit will ripen three or four weeks too soon.

Sec. 7. The tree sometimes dies the next year after the apearance of the disease, and sometimes lingers along with a feeble life for two or three years. Sooner or later however, it is overcome by the disease. I have never known, nor have I heard authentically, of any tree recovering from it.

Sec. 8. Soil, whether of clay or sand, whether moist or dry, whether cultivated or in grass, manured or unmanured, does not appear to me, clearly, either to increase or diminish the liability to disease.

Sec. 9. Trees standing in exposed and sheltered situations, walled and in open ground, on hills and in valleys, seem alike and equally liable to the Yellows.

Sec. 10. Trees standing in places where people are passing to and fro very often near them, though not exempt from the disease, appear less liable to it than others. This is strikingly exemplified in the city of New-Haven, where trees standing close by the sidewalks, outlive all others. The same fact I have observed upon my own premises.

Sec. 11. Luxuriant and vigorous growth is no protection against the disease. Trees have grown 5 feet in the same season when they have shown in the body and fruit the marks of the Yellows. On the contrary, slow growth is *perhaps*, (I cannot speak confidently) favorable to health. On this point I give the following fact. Five years ago this fall, I dug a hole in my meadow, a foot square and 18 inches deep, threw back the earth, and planted a peach stone. It came up next spring, and has grown very slowly. It is now only 45 inches high, but perfectly healthy; while every other tree planted at the same time in my garden, a few rods off, grew vigorously, bore fruit, took the Yellows, and have been dug up.

Sec. 12. When the disease commences in a garden or orchard containing a considerable number of trees, it does not attack all at once. It breaks out in *patches*, which are progressively enlarged, till eventually all the trees become victims to the malady. Thus in an orchard of two and a half acres, all the trees were healthy in 1827. The next year 2 trees on the *west side* of the orchard, within a rod of each other, took the Yellows. In 1829, six trees on the *east side* of the orchard were attacked; five of them standing within a circle of four rods diameter. In 1830, fifteen more were attacked; fourteen of which stood within a circle of four rods diameter. A similar fact is now apparent in my neighborhood. A fine lot of 200 young trees, last year in perfect health, now show disease in two spots, near the opposite ends of the lot, having exactly six diseased trees in each patch, contiguous to each other; while all the other trees are free from any marks of disease.

Sec. 13. Young trees, even in the first summer of their growth, and before they have blossomed, sometimes take the Yellows. For this reason, many suppose the disease to be hereditary. Upon this point, my observation has not furnished me with facts that seem conclusive. Young trees from a diseased parent do indeed take the Yellows; so do those from a healthy parent; and one, as appears to me, is as liable to do so as the other. At present, it may be best to consider this point not settled.

Sec. 14. Whether the disease is communicated from tree to tree through the medium of the blossoms, as is believed by many, is also an unsettled point. I have not known a case where such a communication of disease was clearly proved. On the contrary, there is some negative evidence that throws a doubt upon the correctness of the supposition. I took a blossom from a diseased tree, and applied the dust (pollen) to the blossom of a young tree in my garden. The tree, thus exposed to infection, showed no mark of disease, either in that or the succeeding year.

Sec. 15. If a bud from a diseased tree is innoculated into a healthy stock, whether peach, apricot or almond, the stock will become diseased and die. As this is a fact of some importance, I will furnish some evidence of it. I took some buds from a tree, having symptoms of the Yellows, and inserted part into peach, part into apricot, and part into almond stocks. Some of the innoculations *took* well, but all showed marks of disease the next season. The peach and almond *stocks*, with their buds, *died* the second winter after innoculation. One apricot stock lived five years, but its peach top grew in that time to be only about 3 feet high. Further proof is furnished by a communication to the "New-York Farmer," some years ago from David Thomas, of Western New-York, I believe Cayuga. "In 1823 I procured," he says, "a box of peach trees from the neighborhood of New-York. I observed *some* of these to be of feeble growth; and fearful of losing kinds so rare and so high priced, I budded some into a *most thrifty stock* in the nursery, and some into *thrifty trees* in my peach orchard. On the young stock, two buds *took*, but never sprouted; and in less than a year it *dwindled like the tree whence the buds were taken, and died. Every tree in my peach orchard so budded, has been long since dead*, and no other peach trees have died in that orchard."

Sec. 16. In an orchard or garden, containing both old and young trees, the young trees will generally be diseased first, the old trees last.

Sec. 17. From the very limited opportunity which I have had, to compare the liability to disease of different varieties of peaches, I incline to the opinion that the Connecticut Red Rareripe and the Early Ann, are the last to take the Yellows. Dr. Monson of this city, thinks a White Cling, of natural growth, "endures the longest of any in a healthy state." With the exception of those three varieties, all, whether old sorts originated in times beyond the memory of man, or new ones sprung the very last year from seed, appear equally susceptible of the disease.

Sec. 18. Peach trees budded on apricots, plums, and sweet almonds, are liable to the Yellows.

Sec. 19. Plum trees are not subject to any disease analogous to the Yellows. But the apricot, *standing in the neighborhood of diseased peach trees*, is subject to a sudden decline, ending in death, which I can trace to no visible cause. The growth of the branches becomes feeble; manuring, digging, pruning, all have no effect upon the vigor of the tree. Nothing will save it. Yet I have not seen upon the apricot, the slender shoots and premature ripening of the fruit, which mark the disease of the peach. Nectarines are subject to the disease, and show it in the same manner as the peach.

Sec. 20. The following fact gives reason to believe that the disease commences in a tree, between the month of September and July following. In the month of September, I took buds from a tree apparently in full health. The buds, inserted into young stocks, grew thriftily and without disease for three years. But the tree, from which they were taken, showed marks of disease in July following the time they were taken.

Sec. 21. There is no connection that I have been able to discover between the *Yellows* and the *curled leaf*, except that the leaves of trees, much diseased by the Yellows, do not curl.

The phenomena attending the development of the Yellows as detailed above, seems to authorize two or three inferences—to be made, however with some distrust. Mrs. Marcet (Conversations on Vegetable Physiology,) thus explains the formation of the green color of leaves. "The direct rays of the sun are necessary to enable plants to decompose carbonic acid. In this process, the oxygen of the carbonic acid is exhaled by the leaves, and the carbon deposited in the plant: now, it is *this deposition which produces their green color*. Mr. Sennebien is of opinion that carbon is not positively black, but of a dark blue color. The cellular tissue of plants is of a yellowish white; consequently, when those minute blue particles are lodged within the yellow cells, the combination of the two colors produces green, in which the blue or yellow tint prevails, in proportion as the carbon or cellular tissue predominates." Assuming this to be correct, and taking into consideration that the slender shoots, which are the marks of disease, grow without forming solid wood, (Sec. 1,) and considering that their leaves are destitute of green color, though exposed to the light, we conclude that they do not *decompose carbonic acid*, as healthy shoots and leaves do—*their particular vital power seems to be prostrated or greatly debilitated*. Then, as to the fruit, according to Lindley, (Theory of Horticulture) the food, upon which fruit subsists and by which it is perfected, requires to be elaborated, first in the leaves, and then in the fruit. As far as I have observed, the *leaves of the terminal branches in the early stages of disease* perform their functions regularly, (Sec. 6.) They have a healthy color, are of natural size, and the branches grow with unimpaired vigor. The fruit also appears to be abundantly supplied with food, (Sec. 3.) Hence it seems probable that it is the elaboration of food *in the diseased fruit*, which is imperfect. Lindley says,—"among the immediate causes of the peculiar changes that occur in the secretions of fruits, are heat and light; without which the *peculiar qualities of fruits are imperfectly formed*." He further says, that fruits owe the production of their sugar, their sweetness, to exposure to bright light, *decomposing their carbonic acid and expelling their oxygen*. Therefore, as the fruit of diseased trees is exposed to the usual light and heat of our climate, and yet has an unnatural *purplish red* color (Sec. 4,) showing that the oxygen is not properly expelled; and forms *very little sugar or flavor*, (Sec. 5,) showing that it *does not decompose carbonic acid*, as it should do; we conclude that the *particular vital power of the fruit*, also, is *prostrated or debilitated*, in the same manner as that of the shoots. What has produced this prostration or debility? For myself I must answer, I do not know. Whatever it be, it seems not to pervade the whole tree at once—to be local in its beginning, and to become general by degrees, (Sec. 6)—and capable of passing *by contact*, perhaps in that way only, (Sec. 14,) from one tree to another, (Sec. 15.) Can it be a poison? So little is known of the action of poisons upon plants, that we can hardly be justified in pronouncing positively this *unknown something* to be poison. But there is some analogy, not very striking however, between the action of this something upon the vital forces of the peach tree, and that of *narcotic* poisons upon the functions of the animal system. On the supposition that it is a poison, whence can it be derived? I think not from the soil, (Sec. 8.) I think not from the atmosphere, (Sec. 12.) This breaking out of the disease in *patches*, seems to negative the idea of an atmospheric origin. I think it is very doubtful whether the disease springs from contagion, disseminated by blossoms, (Sec. 14.) It cannot, I think, be owing to particular sorts of peaches having been propagated for a long period, and beyond their natural term of existence, (Sec. 13 and 17.) It may be remarked that the Early Ann mentioned in Sec. 17, is one of our oldest sorts. I think the disease cannot be ascribed to defective cultivation, to injudicious pruning, or injury to the roots of trees; for there was abundance of such cultivation, pruning and injury to roots, long before the "Yellows" made its appearance. The peach worm, cannot, I think, be charged justly with this mischief; for thousands of trees have had the Yellows, which were untouched by the peach borer. What then, causes this disease—whence comes this poison, if it be such? On this point I will hazard a *conjecture*, that it is derived *from some unknown insect*. My reasons for this conjecture, I shall give as briefly as possible.

Animal matter, in contact with living portions of plants, causes, under some circumstances, a modification of the vegetable functions. Thus the egg of a small fly (cynips confluentus,) deposited in the leaf of the oak, causes the leaf to grow into the oak apple. In like manner are produced numerous excrescences, such as galls, cedar apples, honeysuckle apples, black knots, &c. There is another effect of the same cause, not producing an excrescence, but hastening the maturity of fruit. Thus the egg of the apple moth and the worm proceeding from it (carpocapsa pomonella,) cause apples and pears to ripen prematurely; and we see the same effect in the cherry and peach, caused by the plum weevil. So, as we are informed, the ripening of figs is hastened by the process of *caprification*; which consists in exposing the young fruit to small insects found in the wild fig. Now in the case of the Yellows, something operates upon the vital functions of the tree, causing latent buds to start and grow, not, it is true, into excrescences, but in an unnatural manner—causing the fruit to ripen 3 or 4 weeks too soon: in this last particular being quite analogous to the effects of worms in apples, pears, peaches and cherries. May it not be inferred that effects so similar, have a similar cause? To this it may be added, that the spreading of the disease, by degrees, from Philadelphia to other parts of the country; its appearing in patches (Sec. 12;) its seizing young and thrifty trees in preference to old and unthrifty ones (Sec. 11 and 16;) the escape from disease of trees standing where persons are constantly passing (Sec. 10;) the appearance of disease first in a part of the tree and then becoming general (Sec. 6;) are circumstances which seem to me to strengthen the suspicion that some *new, unknown, shy* insect has been gradually extending itself from place to place, over the country, and poisoning our peach trees.

Hitherto no means of warding off or curing the Yellows, has come to my knowledge. Most of the applications for the cure of the disease, have been made on the supposition that it was caused by the peach worm. Such are ashes, scalding water, charcoal, lime, salt, saltpetre, fish oil, and urine. All of them have more or less agency in excluding the borer, but are not all *effectual* even for that purpose. Some of them have seemed to promote for a time, the growth of the trees, and to give a deeper green to their leaves; but none, that I have ever observed, have at all checked the progress of the Yellows. I have tried some applications to the *bark* of diseased trees, such as diluted oil of vitriol, aqua fortis, strong ley of potash, and chloride of lime—not much expecting success; for it is probable trees absorb nothing through the bark. But until we know, as we never shall know, all the processes of nature, we cannot be sure beforehand, what is to be the effect of any application to a living plant. Since the discovery of the means of infusing into living wood various substances, calculated to preserve it from decay or to give it desirable colors, by placing solutions of them in contact with the sap vessels, which are cut across, it may lead to a useful discovery, if diseased peach trees should be made to absorb a variety of matters. Some one *may* be found, that will modify or change the diseased action of the tree—decompose the poison, if there be any. It is my intention next summer, to institute a series of experiments upon this plan, if I can find a sufficient number of suitable *subjects* to operate upon. Others perhaps may find it convenient and be disposed to try the same experiments. If they do, it will be gratifying, I have no doubt, to many of your readers, to see the result in the Cultivator. NOYES DARLING.

New Haven, Ct., Dec. 2, 1844.

MAKE YOUR OWN CANDLES.—Take 2 lbs. of alum for every 10 lbs. of tallow, dissolve it in water before the tallow is put in, and then melt the tallow in the alum water, with frequent stirring, and it will clarify and harden the tallow so as to make a most beautiful article for either winter or summer use, almost as good as sperm.

INTERESTING SUGGESTIONS TO FARMERS.

MR. EDITOR—Since yours of the 5th ult., I have, much to my regret, been unable till now to comply with your request, for an article interesting especially to farmers of "the Granite State." And I must now, in a hurry, write just what comes to hand, or not at all.

I beg the privilege of dropping an apology for my attention to agriculture, when the business of a Christian minister and a general educator, embraces the chief concerns of my life.

Amidst mountains and streams in "the old Bay State," I was raised a laborious farmer, till the age of twenty-one; the employment has always interested and pleased me, for its nature and importance; and I have needed its aid for recreation, health, and my support in my two other professions. Hence I have been, a large portion of my time, from graduating from college in 1808, a practical, experimental, though a moderate farmer, till I quit in the spring of 1843.

There are many subjects of practical interest to New Hampshire agriculturists, common to all in the same business. I will just name some of these, sometimes dropping a hint or two as I pass along, and dwelling some on the production and application of manures, and then say a little on some things more appropriate to this State, and other northern, cold, rocky, mountainous and broken tracts of country, hoping that each item will be in due season, by abler hands, taken up and discussed in separate articles.

I. MATTERS OF GENERAL CONCERN.—These are many; some of them are greatly important, and some, though of much consequence, have seldom, if ever, been suitably noticed and discussed in our agricultural papers. As,

1. Economy in agricultural expenses.—I found means to get along comfortably with, I think, less than two-thirds of the outgoings to which most of my neighbors were subject for the same income. I saved much in agricultural tools, and shoeing oxen and horses. Such is the provision of nature, that none, except for long journeys, and for slipperiness, need be shod at all.

2. The management and application of labor.—Here I probably saved as much more; by expending sufficient labor in proper season, by strict economy in the arrangement of business, that time and labor may not be lost, or misapplied; by using children's help to save that of men; and by laying out no more time and labor than necessary on any one business. This is a matter of great importance. I once saw one of our first rate Cheshire farmers using two yoke of oxen, a horse, two men, and a great boy, in plowing, where *I alone* could plow as well or better, and as fast or faster, with one good yoke of four year old cattle, or a stout horse! Now see the difference in one item; and so of many others.

3. The seeding department.—This is a material affair; including the quality, quantity, and acclimation of seed, the proper season of seeding, the manner of planting, and the preparation of the ground.

4. Due attention to the preservation and growth of all articles between planting and harvest.—Till dry ground flat; but not wet ground. Prepare against drouth and frost, insects, vermin, and cattle.

5. The subject of enclosure and fencing, of green fodder for cattle in summer.

6. The concerns of harvest.—Proper time; care in saving. The same produce of soil will avail much more with some than with others, by savingness. Save weeds, potato, pea and pumpkin vines, for hay. The seed of many weeds makes good meal for cattle. Foxtail, or barn grass, is a wild millet, and the seed should be saved and used.

Allow a few couplets for boys to learn and sing, when harvesting:

I.

In harvest, be saving,
Or farewell to thriving.
Save every potato,
Nor slight a tomato;
An apple or pumpkin
Is surely worth something;
Even acorn or nut
Should ne'er be forgot.

II.

He that won't stoop for bean or pea;
Is not a man or boy for me.
Whoso slights a small ear of corn
Is not to wealth or honor born.
The man who cares not for saving,
Must soon beg or else be starving.
It is always foolish to crave,
When idle and careless to save.

7. The grand affairs of storing safely, and in good or-

der for domestic use or future disposal; of selling or bartering raw produce, and of exchanging it into other articles, by manufacture or feeding, call for much attention.

8. The appropriation of proper articles of produce to different soils. This subject should by no means be lightly passed over.

9. Winter business of farmers, appropriate to them as such.

10. Personal temperance, and temperance in agricultural industry.

11. Suitable work a suitable portion of the time on a farm, for children.

12. Redeeming swamp lands and worn out and sterile soils. A man near the Grand Monadnock, at the cost of less than six dollars the acre, drained swamp land, before about useless, and rendered it arable and astonishingly productive, worth at least a hundred dollars the acre! Much so I have seen "the Yankees" do on the old worn out lands of Maryland and Virginia.

13. The production and application of manures. On this subject I must dwell at large. This is a matter of chief concern with husbandmen, especially of this State. This is the means by which you may be always cropping, and yet your soil will be forever gaining.

Farmers of New-Hampshire, I lay it to your charge, that you have tilled and mowed on an average, full twice as much ground as you ought, and not made half the manure you might and should. Now I hope that you, my fellow-citizens, will examine patiently and thoroughly into the merits of this charge. If it be just, then confess and forsake your agricultural sins; if unjust, then defend your practice like men. In either case, probably both you and the world will be benefited. Of what service for us to be writing and printing on this old subject, unless it set you a thinking and acting?

All animal manures should be housed from the weather and never be frozen. Its fetor should be all absorbed from the air by gypsum, or other fit substances, put on or about it. If the bad smell, as you call it, go into the air and be driven away with the wind, you will lose the best part of your manure. Just so of the urine of all animals, man among the rest. One pound of it, saith a German chemist, is worth more for manure than a dozen pounds of the other excresences. Then do not let a drop be lost. See that it all be absorbed, by saturating turf, peat, oats, straw, leaves, saw-dust, rotten wood, shavings, ferns, bogs, swamp-mud, pond-mud, spent tan, any dead or decaying vegetable substances, which will rot before or after being mixed with the soil. Let your pens, your necessary, your sink-spout, your carrion pit, your hen roost and clay or marl pit, above all, *your hog-stye and yard*, as well as your barn and your farm yard, have a chance to help greatly to increase your stock of manure. You could cause every hog to work enough, in making manure, to pay all his expenses! Then don't allow him to be idle.

You can treble your manure,
By means now in your own power.

In applying your manures and compost, appropriate different kinds to different soils. On deep wet soils, put coarse and long manures; on light sandy soils, put those manures which tend to gather and retain moisture, or such as have a large portion of swamp-mud, clay or ashes. Put from 30 to 50 loads on an acre, where you manure at all, and plow it in very deep on dry soil, and not so deep on wet.

A farmer not far from me, turned barren worthless upland into first rate land, by applying about 100 loads of swamp-mud to the acre.

I will now say a little on matters some more appropriate to New-Hampshire.

The first object of the independent farmer, is the sustenance, comfort and satisfaction of himself and family. With this object in view, many are willing to use endeavors to grow on their own soil some articles for table use, at an expense that would not be justifiable for other objects, such as Indian corn, beans, rye, wheat, turneps and onions. This matter of fancy and pleasure, I by no means condemn. For what we raise, we have; and what we don't, we may miss of, especially that of good quality.

But if increase of property, and laying up money, be the object of the New-Hampshire farmer, then he should turn his attention to the growing and proper use and disposal of grass, potatoes, barley, oats, peas, beets, and comfrey, a new article of agriculture, and of domestic consumption; for these suit the climate and soil.

Barley has been quite too much neglected. It is easily raised on our high lands; its crop is very sure and abundant; it is very nutritious; its fattening qualities are good, and if mixed in due proportions with rye, oatmeal, a mixture of potato and beet meal or comfrey flour, it would make excellent bread, puddings, &c. &c., and would be a good substitute for wheat, if not equal to it. Then turn your thoughts more on barley.

On the late disease of the potatoe, I state just two facts and one opinion. On the sea-shore the disease was not so bad by far, as back in the country. On a farm in Jaffrey, near me, on upland mixed with remains of black growth, the crop was perfect, and on old land of good tilth, other things being equal, the destruction was perfect. My opinion is, that it is an unaccountable epidemic, prevented by some causes and increased by others.

Yours respectfully, Ezekiel Rich.

Troy, N. H., Dec. 7, 1844.

TO THE BREEDERS OF SHORT HORN CATTLE in the U. S.

In the month of May last, I proposed, through the columns of the Cultivator and American Agriculturist in N. Y. to publish an American Herd Book, provided a sufficient demand for a work of that kind should be made in the manner there indicated. At the time I wrote the proposition I had little confidence that it would be met with any *general* zeal, or approbation even, by the breeders of short horns throughout the country: and in this I have not been disappointed. It is apparent that a lethargy pervades too many of our once spirited cattle breeders on the vitally important subject of preserving in an enduring form the genealogies of their individual herds; a course, which, if persisted in, will ultimately lead, not only to their destruction, but to a large pecuniary loss to themselves, and awaken, when too late, deep and lasting regrets.

But the zeal of our American breeders is not altogether lost. A considerable number of enterprizing and spirited gentlemen have manifested strongly their desire that the work shall proceed; and with characteristic liberality proposed such a patronage as shall procure its publication.

I propose, therefore, to commence the compilation of the Herd Book as soon as sufficient material shall be transmitted to me for a commencement; and I now request all those gentlemen who wish their animals registered, to make out plain and distinct pedigrees of their stock, with all necessary references, and particulars that may be important touching their lineage; and if foreign animals, the date of their importation, and by whom made, together with such other facts as will best illustrate their history, &c. It is to be observed that the object of this work is not to *establish* pedigrees, but to *perpetuate* them; and it may at once be remarked, that any animal whose purity of blood is not properly sustained, cannot be admitted within its pages. The English Herd Book was first published in 1822. Previous to that time, and for a few years immediately following, many valuable animals from among the best families of well descended short horns in England were imported into America, whose names and pedigrees are not to be found in its columns. Many breeders in England, not then appreciating the value of such a work, neglected to register their cattle; and these remained thus unnoticed in many instances, altogether, and in others, until the supplementary volumes were published. The descendants of those importations, preserved in their purity, and their history properly authenticated, will be admitted. But in all cases where references cannot be made directly to the English Herd Book, such facts and references as will place the lineage of the animals named beyond dispute, will be necessary to accompany the registry.

In one particular this will differ from the English registry. That work has neither note nor comment. To all but the initiated in Short-horn-lore, the pages of the Herd Book are as a sealed volume in all that relates to their origin, history, and present condition. Names of animals are often inserted without any reference whatever, apparently for no other purpose than to establish them as "Herd Book Cattle." It will be otherwise in this. Interesting facts and illustrations will accompany pedigrees as they may occur, throwing light and information, such as to place every thing relating to this noble breed of cattle in the most attractive form, and develop in the best manner their advantages to the American farmer.

In all cases where the parties are unknown to the subscriber, either personally, or by correspondence, they will please to give the name of some distinguished breeder, or citizen of their own, or a neighboring State, as a reference. This is not required through any suspicion of the entire integrity of any gentleman who may offer his cattle for registry, but as a rule for the mutual protection of each one who desires a true and unimpeachable record of short horns, (as far as it goes,) in America.

As the magnitude of the work (in pages,) will not be known till the materials are all collected, the price cannot be exactly stated: but at all events it will not exceed three dollars per copy, as noted in the prospectus last May, deliverable as there stated.

All pedigrees, &c., are requested to be transmitted, (if by mail, post paid,) to me at Black Rock, N. Y., or if more convenient to the parties, to A. B. Allen, at the office of the Am. Agriculturist, 205 Broadway, N. Y. city, or to Caleb N. Bement, American Hotel, Albany, N. Y., who will duly forward them to me. The terms for registry will be one dollar for a single animal; and fifty cents each for any larger number; to persons having 10 or more animals, with simple pedigrees, a liberal deduction will be made from this last price, according to number; the money to be enclosed with the pedigrees. Accompanying the pedigrees, the number of volumes subscribed for is also requested.

All papers to be forwarded as soon as possible; at all events, before the first of April next, as the work will be put to press to be delivered to subscribers by the first day of June ensuing.

The insertion of this notice is respectfully requested in the Agricultural papers generally, one of which to be sent to me, for which a copy of the book will be presented, and any gentleman who feel an interest in this subject will do a favor by giving information of this proposed publication to any neighboring breeder of short horns, who may not otherwise obtain it.

LEWIS F. ALLEN.

Black Rock, January, 1845.

" BALANCE OF ORGANIC NATURE."

The Chemical and Physiological Balance of Organic Nature—an Essay, by M. J. DUMAS *and* J. B. BOUSSINGAULT, *members of the Institute of France. Edited by* D. P. GARDNER, M. D., Lecturer on Agricultural Chemistry, New-York. Published by Saxton & Miles, 1844—12 mo. pp. 174.

THIS excellent little work which opens new fountains of knowledge, practical as well as theoretical, appears to have been delivered as a lecture by M. Dumas, on concluding his course at the Ecole de Medecine in Paris. It contains the opinions and result of the joint labors of Dumas and Boussingault in chemical and physiological investigations. What is meant by "*The balance of organic nature*," we learn from page 61, where the author makes the following summary of his doctrines:

"If we recapitulate we shall see that the primitive atmosphere of our globe has formed itself into three great parts or masses; one constituting the atmospheric air of the present time; a second, represented by plants; a third by animals."

"Between these three masses continual changes are effected; matter descends from the air into vegetables, penetrates in this way into animals, and returns to the air in proportion as they consume or apply it to their purposes."

"Green vegetables constitute the grand laboratory of organic chemistry. They are the agents which, with carbon, hydrogen, azote, water and oxide of ammonium, slowly form the most complex organic substances."

"Under the form of heat, or of chemical rays, they receive from the sun the force which enables them to accomplish this great work."

"Animals assimilate or absorb the organic substances which plants have formed. They alter them by degrees; they destroy or decompound them. New organic substances may arise in their tissues, in their vessels; but these are always substances of greater simplicity, more akin to the elementary state than those they have received."

"They decompose then, by degrees, the organic matters created by plants. They bring them back by degrees towards the state of carbonic acid, water, azote and ammonia, a state which admits of their ready restoration to the air."

"In burning or destroying these organic substances, animals always produce caloric, (heat) which radiating from their bodies into space, goes to supply that which vegetables had absorbed and fixed."

"*Thus all that the atmosphere yields to plants, plants yield to animals, animals restore to the air. Eternal round, in which death is quickened, and life appears, but in which matter merely changes its place and its form!*"

"The crude and formless mass of the air, gradually organized in vegetables, passes without change, into animals, and becomes the instrument of sensation and thought; then vanquished by this effort, and as it were broken, it returns as crude matter to the source from whence it had come." (p. 61.)

This carries us back to the Creation, Ev αρχην, to the beginning, when "God said let there be light, and there was light." It accounts philosophically for the succession of events as related by Moses. With light came heat, and heat developed vegetation, and vegetation prepared the way for the subsistence, and the after creation of animals.

But our business is not with speculation, but with practical affairs. The food of plants, and the best method of giving them a vigorous growth, are the subjects which are most interesting and most important to farmers. "Every plant (says Dumas) fixes nitrogen during its life, whether it obtains this element from the atmosphere, or from manures added to the soil."

And again,

"One of the first problems in agriculture, is to procure supplies of nitrogen at a cheap rate. With regard to carbon, there is no cause for solicitude; nature has provided that in ample abundance; the air, and every shower of rain are charged with it. But it is otherwise with reference to nitrogen; the azote of the air may be unassimilable, and the ammoniacal and nitrogenous salts which rain-water contains may not be in sufficient quantity. It is indispensable therefore, to surround the roots of almost every plant whose culture is of importance to mankind, with manures rich in azote, as enduring sources of ammonia or of nitric acid, which the plants appropriate in proportion as they are produced. To do this, as is well known to all, is one of the grand causes of expense in agriculture, one of the grand obstacles to its progress; for we are generally dependent upon, and have only access to, the manure we can severally produce. But chemistry is so far advanced in this direction, that the problem requiring the production of a purely nitrogenous manure, cannot long remain unresolved." (p. 43.)

It is elsewhere shown by our author that plants also fix carbon, hydrogen, oxygen, and certain earthy particles or ashes, (p. 37) as well as nitrogen, as a constituent element in their composition. It is therefore doubtful whether a "*purely nitrogenous manure*" be necessary. All compost heaps composed of animal and vegetable substances, furnish nitrogen, and other ingredients capable of promoting vegetation. It would be better therefore to give to our cultivated crops a composition containing various materials congenial to plants, than to offer them one only. How many have been disappointed in the use of lime alone, or salt, or saltpetre, and other single fertilizers? These and other saline and alkaline ingredients may be added to compost heaps with advantage, and increase their activity as fertilizing agents. We are sometimes apt to be carried away by speculative views in farming as well as in other occupations, and to be captivated by something new, while we neglect the more common and useful things. Human excretions form a powerfully azotized or nitrogenous manure, and they compose the fertilizing ingredients in *Poudrette*, which has been highly extolled as a great fertilizer. This is doubtless so when it is not too much diluted or adulterated. But those who have embarked in its production, have done so for the purpose of making money by the sale of it. The consequence is that it is losing its character, because it is too much diluted with peat, or saw-dust, or coal ashes, rendering it feeble or comparatively inert. The excretions of birds from the coasts of Peru and Africa, are now imported by the name of *Guano;* and those interested in its sale give glowing accounts of its fertilizing qualities. Some are captivated by its recommendations and novelty, and are buying a dear article, (which is not universally applicable like barn-yard manure,) and which may be cheaply imitated by chemical combinations.

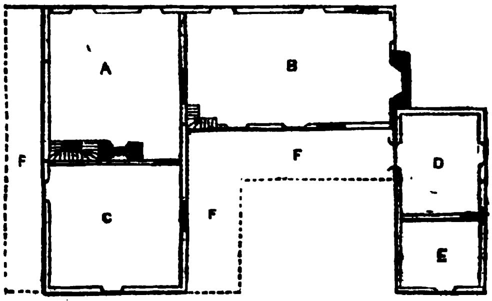
Now I insist upon it, that farmers in this and the adjoining States where manure *must* be used, should look to, and make the most of, their domestic supplies before they purchase factitious or imported manures. If a farmer raises poultry, his hen roost will furnish materials similar to guano. He may have the temple of Cloacina emptied and its contents made into poudrette, as I know was practiced by a neighboring farmer. In 1843 he had the contents of his sink mixed with sand and chip manure, together with a large cask of plaster of Paris, and a quantity of wood ashes which he had saved. These ingredients when mixed together, and dry enough to shovel over, made 20 or more ox-cart loads of good manure. Again in the spring of 1844, the excretions from the same sink were mixed with sand, some ox manure, chaff, a cask of plaster, and some wood ashes as before, making 24 loads of good compost. In 1843 the compost was employed to manure potatoes and turneps, and in 1844, potatoes alone, causing a vigorous growth in both instances.[*]

We cannot raise hogs with advantage in this part of the country without keeping them shut up in pens all the time, and well supplied with straw or sea-weed, and soil or muck, and then the manure made is part of the profit. Here swine are fed both with animal and vegetable substances, and their excretions are rich in nitrogen or azotized materials, or as Dr. Mitchill would have said, replete with "Septon." Hence it is that hog manure is more powerful than the excretions of horses or cattle. But when we mix all these together in the barn-yard compost, we have wherewith to supply all the wants of cultivated plants with carbon, hydrogen, oxygen, azote, &c. Let farmers therefore look around their own premises, collect, mix and manufacture for themselves as much as they can before they buy any manure.

The lecture or essay of M. Dumas occupies but 64 pages of the work under consideration. The remainder is made up of documents illustrating in detail the subjects touched upon in the essay. There is also an appendix by Dr. Gardner, to whom we are indebted for bringing before the American public the lecture of M. Dumas as translated from the French. We had marked some passages to guide the reader, but must refer him to the work itself as worthy of attentive perusal, hoping it may give him as much satisfaction as it did

A PRACTICAL FARMER.

Staten Island, Nov. 23, 1844.



PLAN OF A HOUSE—(Fig. 22.)

MR. TUCKER—I transmit for your consideration, the above plan of a boarding-house, which I have been erecting, and which I think convenient, for the accommodation of 12 or eighteen boarders, i. e. for children attending school.

It is one story and a half, as that is sufficiently high for the placing of beds around the chambers, where most of the beds are put up, and which makes them quite pleasant. The sitting-room (A.) and parlor (C.) have a stone chimney erected between them, with a fire-place to each room—also the dining-room (B.) has a good stone chimney. That room answers for the purpose of domestic labor, such as carding, spinning, knitting, sewing, &c. beside being occupied for a dining-room. Our cooking is mostly done by a cooking stove. Stairs go up into the chambers from the sitting and dining rooms. The chambers are partitioned off into sleeping rooms, just according to the fancy of the occupant. A. Sitting room and library, 19 by 20 ft.—B. Dining room, 14 by 33—C. Parlor, 18 by 20—D. Kitchen, 12 by 14—E. Bed room, 10 by 12—F. Piazza, 7 ft. wide. A SUBSCRIBER.

Choctaw Nation, Dec. 27, 1844.

THE CULTURE OF THE SWEET POTATOE.

The Sweet Potatoe, (*Convolvulus batatas,*) was introduced into England previous to the Irish potatoe, and was in those days supposed to possess the qualities of restoring decayed vigor to the human frame; and consequently more frequently found in the shop of the confectioner, than in the larder of the cook. It is a native both of Spain and the Canary Islands, and was, as an edible, in such *bad repute*, that the renowned *Evylin*, in his work on Gardening, as early as the year 1699, recommends that potatoes should be planted in the worst ground. We are glad that we live in an age and country, where we can say, plant sweet potatoes in your best land; though in all probability, in the days of the author above quoted, the promise of this root was such that it held forth no inducements to the cultivator; and certainly time has shown that England's climate and soil, has proved uncongenial to its improvement. There are many, even in our southern country, at this day, who take his advice and neglect this crop, from the sole fact perhaps, that they themselves are not fond of potatoes, not consulting the tastes of voracious hogs and cows, who, squealing and lowing for corn and hay, would be happily regaled with a satisfactory meal from the potatoe pile.

In the south, we regard the successful cultivation of the sweet potatoe as an easy attainment. It delights in a sandy, rather light, deep, and well stirred soil, which must be located on a dry subsoil, though in some instances we have seen good potatoes raised on clay lands. A moist atmosphere, the temperature of which is warm, appears most conducive to the early growth and pleasant flavor of the sweet potatoe.

From its great use in culinary concerns, it deserves more attention at the hands of our southern planters than it has as yet received. The climate south of 36 degrees, has been found admirably adapted to its growth; and no crop can be planted which will yield more to the acre. The fine effect which they give when fed to milch cows, should make it a favorite with all who delight in good milk and butter. When dried in a brick oven, they furnish the material for making a delightful and wholesome beverage in the shape of potatoe beer. The sweet potatoe also furnishes a large amount of the vegetable food of slaves in the southern States during the winter months, and though they are generally cultivated as a provision crop by most planters on almost every plantation, the negroes cultivate them in the ground which is allotted to them for their own private use. Such is the partiality of the plantation negroes for potatoes, as an article of food, that as soon as the season for digging arrives, they prefer an allowance of this root to any of the cereal grains. Indeed, it seems they were relished by our revolutionary ancestry, for when an embassy was sent by the British commander at Charleston, to Gen. Marion in his swamp encampment, that chivalrous commander, with his characteristic hospitality, invited the Royalist to dine with him; the table was arranged, when he found "flesh, fish, and fowl," to consist of sweet potatoes alone. He straightway returned to the British quarters, and expressed his opinion that it was hopeless to expect to conquer men who could fight for *liberty* on *such fare* as *roasted potatoes*. Mr. John B. White, a talented and gifted son of Carolina, has made this scene the subject of a national painting which stands high in the world of art. In this picture, the negro seems delighted, more at the style in which his potatoes were roasted, than at the amazed countenance of the tory officer.

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[*] We do not give this as a correct recipe to make poudrette, nor is an invariable one necessary, because it may be made in different ways. Two materials are necessary in its composition; one to make bulk, and one to render it inodorous. The bulky articles may be soil, or muck or peat, tanner's bark, saw-dust, spent wood ashes, coal ashes and other things. To render night soil inodorous, diluted sulphuric acid may be used, or ground plaster of Paris, wood ashes, fine charcoal and sulphate of iron. My neighbor, among other things used sand to make bulk, because he had it in abundance, and his soil was a stiff clay.

To the negro, the potatoe is a blessing; for, to the known improvidence and carelessness of this race, it is particularly adapted, as it requires no culinary skill to make it both edible and palatable, simple roasting in the ashes being the best preparation the cook can give them. It is frequently prepared for the table by baking, and makes good custards, puddings and pies; the latter equaling rhubarb pies, and made much in the same manner.

If the soil has been exhausted by previous culture, the land should be manured. My father, Mr. John Summer, who has always been successful in the culture of potatoes, observes the rule to manure broadcast, and for this purpose, has prepared in the farm yard a compost, made by hauling in oak leaves, which with the admixture of the manure of horses and cattle, furnishes the proper material, and this, when sufficiently rotted, is spread broadcast over the surface of the soil. The general plan, however, in the south, and that which is considered easiest, is to *cow pen* the ground intended for potatoes, late in the summer. When the latter plan is followed, it should be continued during the early part of the winter, and followed with frequent plowings, so that the manure deposited may not evaporate, or be washed away by rains. Plow up the land very deep in January, to which we would recommend a subsoiling to those who have the proper implement. Plow again in February, and in March repeat with a like plowing, immediately after which, bed up the land with a suitable plow four feet wide; upon these beds drop the potatoe slips, six or seven inches apart, covering them with a hoe, one and a half inches deep, with good mellow soil.

It should be remembered that the proper preparation of the soil, is of very great importance to the future crop. This mode of planting in beds is usually termed ridging, and simply to cross the beds into equal squares with their width, we can form potatoe hills by drawing up the corners of the squares with a hoe. We have tried both hills and ridges, and have no preference, though the soil when planted in hills is most likely to be washed away by heavy rains. From three to four slips should be planted in the hill. As soon as the slips begin to sprout, the ridges or hills should be scraped off with the hoe, which will enable the young plants to come up readily, and immediately after they have appeared above ground the beds should be plowed down carefully, and the plowing to be performed as close to the plants as they will bear, so as not to disturb the parent slip. This will yield to the young plants that warmth which is so much desired in this culture, and potatoes thus cultivated will stand the summer drouths better than those which have been cultivated otherwise. Frequent plowings, with a few times hoeing, is all that is necessary, until the vines attain a length which interferes with the plowing, at which period the ridges and hills should be drawn up with the hoe, fuller than they were originally, and in such a manner that they should be hollow at top. Great care should be taken not to draw any soil on the vines, and therefore whilst drawing up the beds they should be gently raised by the hands. Just before the vines reach the bottom of the beds, a plow should be run twice through the rows in order to give them mellow earth to root in. This will serve to sustain the vines in extreme drouth; and as the leaves are almost the only organs which feed tuberous roots, I would earnestly recommend an abandonment of the practice of topping potatoes or of tearing the vines with a plow, and particularly the practice of making a calf pasture of the potatoe patch late in summer.

Potatoes for planting should always be raised from cuttings, as they are generally more succulent, and vegetate better in the spring than those which are raised from small potatoes, and hence large potatoes bringing stouter plants, are preferable to very small slips.

The product per acre may be variously estimated. From two to three hundred bushels are commonly produced. My father has raised upwards of five hundred bushels of good potatoes to the acre, and from two to three hundred bushels has been an average crop with him. They were of the dark mottled variety usually called the Spanish potatoe, which for a general crop, we consider best, though any and every sort should be cultivated, which are regarded of good quality, and as there are perhaps more than twenty approved varieties, we are not advocates of any particular one. The yams suit a sandy location, whilst the dark Spanish would succeed better on clay soils. There are several varieties with a red skin, which are much esteemed by some. The variety known as the "Bermuda," are perhaps the best early variety, and for this reason, a portion of the crop should be planted of them, or some other favorite early variety. There appears to be only two distinct varieties of the yam, the yellow and white. Both should be cultivated by putting the slips in a bed, and drawing the sprouts as they appear above the ground, and planting them in ridges. In this way, but a comparatively small number of slips are required of this variety; for all other varieties of the sweet potatoe, we would advise to plant the root itself. The yam is easier preserved during winter, and late in spring; is of better flavor than any of the other varieties.

My friend, Col. R. F. W. Allston of Georgetown, during the past season, tried an experiment, which, as it is new, and upon the whole, has succeeded admirably, I will notice here. The land was laid off in beds four feet apart, and upon these the seed were planted, by laying them on the level ground eight inches apart, and covered over with "tailings," (the straw, &c. blown off in winnowing rice,) to the depth of a foot. In consequence of the severe drouth of the past spring, the stand proved a very bad one, the sprouts appearing at the distance of one, two, and three feet apart. The prospect, he says, for a crop, was very meagre, until the month of July, when the plants which were standing, grew off with a vigor quite remarkable. In consequence of the drouth, a little earth was drawn upon the beds once, and the grass which showed itself was once picked off. The potatoes were taken up the second week in November, and they yielded 283 bushels of excellent roots to the acre, several of which were exhibited at the Anniversary meeting of the State Agricultural Society, weighing from 4 to 6 pounds. They were yams.

Our plan for preserving potatoes is simple. A circular bed is formed 8 or 10 feet in diameter; this is raised a foot above the surrounding surface to ensure its being dry; on which we place dry pine straw, corn stalks, or pine bark; in the centre of this, we set upright a plank tube with a great number of holes bored in the sides; around this tube the potatoes are piled up until the cone is completed within a few inches of the top of the tube, when they are covered up with corn stalks, pine straw, &c., and lastly with earth five or six inches thick. The tube may be closed in frosty weather by a wisp of straw. During mild weather it should be opened in order to allow the heated air arising from decayed or bruised potatoes to escape. With this, and the addition of a temporary shelter, we have always succeeded in saving potatoes during the winter.

We unhesitatingly recommend that the same land be planted in potatoes each succeeding year, believing that the culture of this crop adapts the soil for the increased reproduction of the root, and that the covering of the vines when potatoes are gathered, restores to the soil a larger supply of nutrition, than is consumed by the production of the crop. **Wm. Summer.**

Pomaria, S. C., Dec. 18, 1844.

THE HORSE SPECTRE.

Mr. Editor—I love a good Horse—in fact, *I love them that love Horses*. I once rode fifty miles on horseback to see a broken down Racer, and was amply repaid for my labor. Indeed, he was a remarkable animal on many accounts; and although thorough bred, with a pedigree of the greatest purity, he was as heavy as many a wagon horse. His color was a deep chestnut; bordering on black, with eyes of light brown, that seemed to be planted in the cheek, about midway between the nose and ears, giving him an appearance quite unearthly: his action also, quick and hurried, and of the most eccentric character, was calculated to inspire a sort of terror in the beholder, leading him to be careful how he ventured into the enclosure where he was confined. And yet, withal, he was perfectly gentle and manageable, and of the most generous disposition. At the time of which I write, he was in possession of the Messrs. Badentram, of Presteign, Radnorshire, Wales, (England) and there I saw him. Indeed, his history throughout, is so remarkable, that I feel a desire to relate it, with your permission, for publication in the pages of the Cultivator; true to the letter.

One day, a stranger called at a farm-house in that part of the country to inquire for board. He was a citizen of London, a Jeweller, and had been ordered into the country by his physician, for the benefit of air and a mild diet. The farmer observed they had not been accustomed to take boarders, but thought perhaps he might as well remain where he was, and try how he liked their accommodations. On the stranger inquiring the terms, the farmer said that depended upon how they liked each other; and at the end of a month, when the stranger offered to pay, the farmer said his wife and he had not yet derermined upon what it should be. In another month, the health of the stranger being reinstated, he again asked for his bill, when the farmer informed him that he and his wife calculated they were about quits, as his society and conversation had been to them of quite the value of what he had received; and finding that nothing he could say would alter that determination, the stranger took his leave, promising, that he would, some day, send him a present from London.

Not long after, a man led into the farm-yard, an old blind mare of the highest blood and pedigree, heavy in foal by the best horse in England, **Phantom**; an accompanying letter requesting that she might never be sold, but be returned, if the farmer should grow weary of keeping her; hinting also, if the foal should prove a horse colt, that his name be called **Spectre**. In due time the mare brought a horse foal, which, with the extreme care bestowed upon him, grew up a remarkably fine animal, being entered to run for a plate at two years old, which he won with the greatest ease to himself. Not so however to the rider, who, with the utmost difficulty could manage to keep himself on his back by holding on to the pommel of the saddle; bridle, whip and spurs, being totally useless and out of the question; for with nose to the ground, and his feet at every stroke appearing above his head, the back a semicircle at one moment, and an inverted ellipsis at the next, it would have been easier to sit a camel in full trot! no other person being able to accomplish the feat of *sitting* him—to *guide* him, being a vain and useless attempt. After this, he, with the same rider, won every thing he started for, until on the eve of a very important race, in which he was backed by the whole country at immense odds, a stranger offered one of his owners (there were two persons who had shares in him) a very large sum of money, if he would permit his horse to be beaten! The temptation was too great to be withstood, although the man knew that his partner had risked his all upon him, as also many more of his personal friends: the only way to accomplish it being to overweight him. This was accordingly done, and on striving against a saddle full of shot, the generous and noble animal sprained his shoulder and brcke down, his rider afterward declaring, that even then, he had more work to make him lose, than he ever had to make him win. And while in this broken down condition, he won three silver cups at three different meetings; the last at the great race of Worcester, still fresh in the memory of thousands, where he distanced almost the whole field.

After this, he was withdrawn from the turf, and was kept as a stud horse; and as such I saw him with his blind dam, in an adjoining paddock again in foal, at the age of 28 years! Many noble horses, the best in that part of the country, were produced from this stock, the owner making an annual sale by auction, chiefly of match horses for the carriages of the nobility, many pairs bringing from $1500 to $2000 at three years old; the last lot put up being *Spectre* himself, with the intent however, of buying him in privately, and this was done more than once, at the price of $5000.

When the stranger left the farm-house for London, he desired the servant girl to inform him when she should be about to get married: this she did, and received as a present, a valuable diamond ring; which, if you will allow me to *suppose* she sold for a sum of money sufficient to stock a small farm, upon which she and her husband resided for many years in contentment and happiness, you will then have a *finale* in keeping with the main story, for the truth of which I will vouch. J. P.

THE JERUSALEM ARTICHOKE.

(*Helianthus Tuberosum, Linn.*)

Mr. L. Tucker—My attention was directed to the history and culture of this plant, in consequence of flattering experiments made with it by Mr. Gunnell and others in Greenville in this State, and as it is rapidly obtaining in some parts of the State, a few remarks in connection with its superior advantages as a root crop, may not be objectionable to the readers of the Cultivator. Although it is called so, it is botanically, in no way allied to the Artichoke, but is of the same genus as the sun flower, which it much resembles. The term Jerusalem, is, according to Webster, a corruption of girasole, the Italian name for sun flower; and it derives the appellation of Artichoke from some fancied similarity in the taste of the tubers with the artichoke bottoms. It is a native of Brazil, and was first carried to England about the year 1620, and before potatoes were so generally in use, was extremely popular as an edible root. Mention is made of it in old agricultural treatises, as the *Canada potatoe*, to distinguish it from the common potatoe, and it was sometimes called the *Virginia potatoe*. It was regarded as wholesome, and is of an agreeable taste, though it is never dry and mealy like the potatoe, being rather moist and soft in its texture, and is nutritious. Being hardy and perennial, they succeed in almost all kinds of soil. It was almost lost sight of in agriculture, until within a few years. Latterly it is obtaining as an article of food for domestic animals.

Twelve to fifteen hundred bushels have been obtained from an acre, when properly cultivated, and being relished by horses, cattle and hogs, it is undoubtedly the most profitable root crop which can be planted in the south; and perhaps it might succeed in more nothern regions. It is rich in farrinaceous substance, and all animals do well and improve when fed upon them. Last spring a friend sent me about a quart of tubers. I did not think this small quantity worth planting, as they were much injured and dried up by their long exposure. On the 3d of May, fully two months after they should have been planted, I had a small space of ground, about a rod, prepared, and put them in. A drouth ensued, and they did not come up soon, and consequently lost a great deal by their being so late. They were planted in drills two and a half feet apart, and twenty inches in the drill; but the seed being so badly injured, the plants were very irregular. They were plowed once, and the grass and weeds afterwards removed with the hoe. In November I had them plowed up, and upon gathering them, found I had ten bushels; and it is my opinion that if they had been picked clean from the land, the yield would have reached twelve bushels. The tubers filled all parts of the soil, and some of them were two feet long, consisting of small bulbs connected by succulent roots. The roots are white, and extremely tender, whilst the tubers are slightly tinged with red. The roots make the best slips for planting, and if cut up, leaving an eye to each slip, they readily vegetate. When it is intended to feed this crop to hogs, they require no harvesting, for they readily withstand our mild winters; and if the hogs are turned in on them, they usually provide for themselves. For calves, sheep and horses, they must be gathered and washed, but unlike other roots, they require no cutting up. They might be fed to sheep, by merely plowing up a few daily, and letting the sheep eat them immediately from the ground. In consuming this crop, the hogs give the ground a thorough plowing, and by turning under the stalks and leaves, they add much to the soil. Some have asserted that it is an exhausting crop, but from the genus of the plant, I infer it is not. The leaves are large, and the stalks are crowned with beautiful yellow flowers.

I shall plant them at the rate of three bushels to the acre next year. I think that quantity sufficient. They grow here on all dry soils, but will not succeed well on damp locations. Very respectfully, A. G. SUMMER.

Pomaria, S. C., Dec. 1, 1844.

PRODUCTS OF THE DAIRY.

OUR article in the January paper having introduced this subject to the readers of the Cultivator, we shall now proceed to give some statistics relative to the quantity manufactured, and endeavor to show that the market which is now opened to our cheese in foreign countries offers great inducements to our dairymen not only to continue in the business, but to improve the quality of the article until it will be sought for in all foreign markets as well as in our own country. The census of 1840 gives the aggregate value of butter and cheese manufactured in every town in the United States. From the statistics thus gathered much valuable information may be obtained, although, if the number of pounds of each had been given, we might have arrived much nearer to correctness, as the price in different parts of the union differs materially. We doubt also whether entire confidence can be placed in the correctness of the census, although it may approximate as near correctness as any information within our reach. The amount at which the products of the dairy were valued in 1839, in the State of

New-York, was	$10,496,021	New-Hampshire,	$1,638,543
Ohio,	1,848,869	Massachusetts,	2,373,299
Pennsylvania,	3,152,987	Connecticut,	1,376,534
Maine,	1,496,902	Vermont,	2,008,737
New-Jersey,	1,328,032		

The quantity made in the southern and western states is comparatively small. Virginia however shows an aggregate of $1,848,869. The aggregate value of the products of the dairy in the entire union is put down at the round sum of $33,787,008. The quantity of butter and cheese made in Ohio has greatly increased since 1840. Indeed without any evidence before us we should presume that the amount sent to market from that state has doubled in the last five years, while the quality has greatly improved. A correspondent in the city of New-York, largely engaged in the produce business and well qualified to judge upon these subjects, says,—"As to the quality of butter and cheese made in Ohio, it is rapidly increasing and greatly improving in quality, and I think bids fair to go ahead even of the Empire State in quantity manufactured. It will not be long before they will match us in quality. A large amount of the butter and cheese made in Ohio goes south and west, which is so far favorable for that made in our own State." That Ohio is to be one of the most important States in the Union in her dairy products as well as in every thing else which pertains to the agriculture of the northern States, there can be little doubt.

The State of New-York must, however, continue to furnish immense quantities of dairy products, and as we remarked in a former article, "the central and northern parts of this State must constitute *the dairy district*, from whence must be derived a very great proportion of the butter and cheese used in our large cities, and which is needed for shipment to Europe."

Of the ten and a half millions of dollars worth of dairy products in the State of New-York in 1839, more than three millions worth was produced in the eight counties of Oneida, Jefferson, Herkimer, Oswego, Madison, Otsego, St. Lawrence and Lewis. Chenango, Cortland, Onondaga, Steuben, &c. also produced large quantities. Orange, Duchess, Delaware, and other river counties produce large quantities, but as we have before remarked, a very great proportion of this is sent to market in small kegs, pails, &c. to supply the summer demand. That from the other counties named, as well as from the western States, is relied on for a winter supply.

The amount of butter, lard and cheese which arrived at tide water through the New-York canals in the several years, since 1841, is as follows: The butter and lard having been kept in the same account, we are unable to get at the exact amount of each.

	1841.	1842.	1843.	1844.
Butter and lard, lbs.	16,157,653	19,182,930	24,215,700	22,202,700
Cheese, lbs.	14,171,081	19,004,613	24,336,260	26,598,300

This table shows a constant increase in the quantity of butter and lard until the present year. This year, however shows a falling off in these articles, which may be attributed partly to the fact that the great increase in cheese has caused a corresponding decrease in butter, and in part to the limited amount of lard sent to market the present year. The increase in cheese is very great, being nearly double the amount in 1844, which was sent to market in 1841.

To show the increase and the relative proportions of butter and cheese, we give the amount of each shipped from this place (Rome, Oneida co.) in four years, with the average price in each year

	Butter.		Cheese.	
1841	1,411,266 lbs.	15 cts.	1,632,196	5 cts.
1842	1,625,069 "	10	2,192,753	5½
1843	1,486,044 "	9	2,795,489	5
1844	1,914,736 "	11	3,151,431	5

At Utica the amount cleared is probably about equal to the amount shipped here, and at Little Falls large quantities are also shipped. At Sacket's Harbor, Oswego, and several other points on the lakes, and also at many other places on the Erie and other canals, considerable quantities are also annually shipped.

It will be noticed by an examination of the above table that the increase in the quantity of cheese is far greater than the increase of butter. This is accounted for by the foreign demand which has sprung up during the last few years. The success of experiments in shipping to Europe has directed public attention to the advantages of a foreign market for the surplus produce of our dairies, and more care has been bestowed upon the manufacture of cheese, especially in large dairies. Circulars, addressed to dairymen by shippers and other dealers, giving directions for the modes of manufacture, and the size and shape of the cheese, &c., had the effect to arouse attention and encourage investigation, until many of our cheese makers now are as familiar with the method of manufacture required for the English market as our own.

From "Wilmer & Smith's European Times," (published in Liverpool) of Dec. 4th, we extract the following remarks: "The imports of cheese have been large during the month, and both as regards their condition on arrival, and the general quality and selections of the shipments, are proving decidedly superior to those of last season. Their sale is consequently much facilitated, and we have every prospect of a large and steady trade in the article during the winter. The demand in the past month was large, increasing towards the close in consequence of the advanced rates obtained at the Chester and other cheese fairs; a corresponding advance cannot be secured in America: but we quote the market fully 2s. to 3s. higher for all qualities, and with a firm tone on the part of the holders. A higher range of prices than usual is expected to be maintained throughout the season, owing to a deficiency in the make of English cheese, and the great advance in the value of butter." The same paper says: "Butter continues to advance in price, and in confirmation of our last advice, we can with confidence recommend shipments from the United States, and would suggest that the lower priced qualities (if fit for eating or for culinary purposes) would be the safest shipment. In the finer and milder sorts we would fear such a deterioration in quality on the passage as would bring them down to the level of the inferior."

These paragraphs are given here not so much to advise our readers in regard to price, &c., as to show what is the opinion prevailing in England in relation to the quality of our dairy products, and also that we can reasonably expect a good demand for these articles abroad.

Our New-York correspondent, from whom we have before quoted (J. E. Southworth, Esq., of the firm of Southworth & Beach, 31 Water-st. N. Y.) remarks in relation to exports as follows: "I do not think the quantity of cheese shipped to Europe this year much larger than last, although the shipments were made earlier last season than they have been this, consequently a large amount was damaged by hot weather. This has learned shippers to be more particular, and not to send cheese in warm weather. The shipments have been very heavy during November and December, and those heard from have all paid well. The cheese sent this season has been of much better quality than that sent last season; in fact no prudent shipper will now purchase any but the best quality. *The shipments are not half as large as they would be if we had a better quality of cheese to send to John Bull.* This ought to stimulate our farmers to make a better quality."

Thus we see that we have opened to us a foreign market for our cheese, which may be increased to almost any extent if the farmers of this country will so far consult their own interest as to make a good article and one suited to the English market. Without expressing any opinion relative to the question of a tariff, we have no doubt that all will agree with us that it is matter of no small moment to American farmers to have a ready and remunerating sale for their surplus produce in foreign countries, and that foreign demand for American provisions does now, and will continue to exert a favorable influence upon our agriculture in all its departments.

The following table will show the amount of butter and cheese exported from the port of New-York in the years 1843 and 1844.

	1843.	1844
Butter, firkins,	43.034	23,761
Cheese, casks,	8.964	11,241
do. boxes,	62,112	77,173

Showing a decrease in the exports of butter, of almost twenty thousand firkins, and an increase in the exports of cheese, of not far from one-fourth.

We have thus glanced at some of the statistics relating to the manufacture, exports, &c., of the products of the dairy, and have prolonged this article to a great length without arriving at an important point in our subject viz. The means which should be adopted to secure the greatest increase in quantity and improvement in quality of dairy products. This will form the subject for another article, when we hope to prove beyond the possibility of a doubt, that it is in the power of nearly every dairyman to make a *good* article, and also that an increase of one-fourth in the average per cow may be made without any thing like a corresponding increase in expense. This we are aware is a bold position, but it is nevertheless one susceptible of proof, and we shall produce something more than our own assertions to establish the positions assumed. In the mean time let us beg of those dairymen who are making no more than one hundred pounds of poor butter, or perhaps two hundred and fifty lbs. of poorer cheese per cow, to investigate the subject, and see if they cannot discover the cause of their want of success.

E. Comstock.

Farm School.—The late John Parker, Esq. of Boston, among other munificent donations, gave $4,000 to the Farm School, on Rainsford Island.

IMPROVEMENT OF WORN OUT LANDS.

We have received a copy of a Report on this subject, made to the Union Ag. Society, Hartford county, Conn., by Samuel Camp. Not having room for the whole, we give the following, which embraces the substance of the article.

In directing the mode of improvement to be pursued, Mr. Camp thus speaks:—"In the first place attend to the barn yard. This should be of sufficient size for all your cattle, and in a dry place, the water from the eaves of your buildings being all turned out of the yard. An embankment should be made around the buildings and yard, to prevent any water from coming in which is without. And as special care should be had to the liquid, which is the most valuable part, let your yard be hollowed in the middle; the outside twelve feet in width, to be raised high enough to keep your cattle dry. This twelve feet at least should be covered with cow houses. Litter this over with straw or some vegetable matter, then a large supply of peat or muck, and litter over the top, to keep your cattle clean; turn all your cattle on every night through the summer, having brined straw or hay in the racks and mangers, and plenty of water in the troughs, (as a good well of water is essential.) Turn none of them off day or night in the winter. Your horse stables need no floors; level them off, and keep them well littered; always feeding grain sufficient to induce the poultry to scatter the droppings among the litter that you may not stumble over them when frozen. Pursue the above mentioned course with muck and litter, until spring; then clear all out applying chiefly to corn. Begin then anew—treat your hog pen in the same way, only the manure from this should be carried out late in the fall and spread evenly over the barn yard, and littered with straw, and if you have put in weeds with ripe seeds, a few bushels of salt may be put in to kill them. Near your out-house, place some loads of muck or peat with a few bushels of lime or ashes, having a box placed under the building that you may draw it out often and mix its contents with your muck—thus making your own *Poudrette*. If these fall short of being enough, take a supply from muck or peat swamps. To one cart load, put of ashes 2 bushels, of lime 1 bushel, of crushed charcoal 4 bushels, of clay one-third of the whole. Always see that your land is seeded after cropping. Green vegetables draw their support in a great degree from the atmosphere; hold the dews, and enrich the land, until the seed ripens; they then take from the soil, and if the substances are not there which they require, there will be a failure of the crop. Wheat, clover and millet, require lime in the soil to ripen well."

Mr. Camp recommends plowing in green crops, the best of which he thinks is clover. Wheat and rye are also mentioned as suitable to stand through the winter and plow in in the spring. He says—"If land has nothing green growing upon it, keep it mellow and free from crust, that it may drink in the dews, and in a little time it will produce a crop without manure. Dry stubble, where there is nothing green, should be turned under."

Mr. Camp closes with some good remarks on the training of sons and daughters. His advice to farmers on this subject is thus given. "Train all your sons and daughters to habits of industry, on the farm or in the kitchen; let the mind and hands go together to the work, and both are strengthened. Give the mind proper food, let the thoughts be employed in something noble, benevolent, and exalted. Much has already been learned, and the wise man regards this as an evidence that much more knowledge may be acquired. Let none say to the mind 'thus far shalt thou go and no farther'—it is a little spark from Infinity, which knows no bound!"

Prairie Grass.—Among things which are "*decidedly flat*," the Prairie Farmer mentions the following:—"If a man has got him a dairy of a dozen cows, calculating to get rich in making butter, without having made any preparation for them in the way of feed—bragging loudly to some eastern friend, of the all-sufficiency of prairie grass—when he finds that grass as dry as stubble from August to Dec.—we think he will feel decidedly *queer*."

CONDENSED CORRESPONDENCE, &c.

Fine Fruit in Ohio.—We learn that the Hon. James Matthews, M. C., of Coshocton, Ohio, has been for some years making an extensive collection of choice fruits from every section of our country, and from abroad. He has now growing about six hundred varieties, including apples, pears, peaches, cherries and plums, beside a great variety of nectarines, apricots, grapes, gooseberries, strawberries, &c. His trees are all young, only about fifty of the varieties having produced fruit the past season. We know of no finer climate for fruit than that of Ohio, and we are glad that Mr. M. is making such efforts to ascertain what varieties are best suited to it. He will, by these efforts, confer a benefit upon his constituents, which will entitle him to their lasting gratitude. In the culture of gooseberries, of which Mr. M. has 34 kinds of the large English varieties, he has been very successful for two years past, having entirely escaped the mildew which has proved so great an obstacle to the culture of this delicious and healthy fruit. Should his fruit escape the blight another year, he will be more inclined to think it is owing to his, in some measure peculiar treatment, and will give the public the benefit of his experience.

The American Larch.—Extract of a letter from Mr. M. Ingalsbe of Washington county in this State, to the Editor:—"Much has been said of late in the Cultivator, about the American larch, or tamerack, for timber. We have had much experience in this section, in the use of it. The farm upon which I was 'brought up,' is connected with a swamp, 4 or 5 miles long and one quarter to half a mile wide, and the principal timber growing on it was formerly tamerack. There appears to be two varieties of it; one is nearly all sap wood; the other has but little; the former is nearly worthless for posts or rails; the latter is considered to be the best timber for posts that can be found in this region, red cedar excepted. I have heard several old gentlemen say they had posts that had been in the ground for thirty years and upwards, while I removed a piece of fence that had stood only eleven years, and the posts, many of them, were rotted nearly off. They were of the first variety I mentioned. This worthless variety is what some call the 'second growth,' a term which I do not precisely understand. This timber is valuable for building; it grows straight, is very stiff, and will hold a nail equal to white oak. The rafters to most of the buildings in this section are poles of this wood. A gentleman of this town told me that his front gate post had stood in its place 30 years, and was an old weather beaten post when he put it there; I examined it, and it was quite sound at the time. The wood is the common wild black cherry. I never heard it recommended from any other source."

Death of cattle from dry corn-fodder.—Jas. Grant, Esq. of Davenport, Iowa, informs us, that on turning his cattle into the corn-fields, after the corn was gathered last fall, several of them died from constipation. The stoppage took place in the manyplus, (manifolds) or third stomach. The death of the animals was so sudden that cows which gave a good mess of milk at night, were dead the next morning; and oxen which worked as well as ever in the morning, died in the afternoon. After having lost several of the herd, among which was a valuable Durham bull, Mr. Grant saved the remainder by administering heavy doses of Epsom salts, and following generally the treatment recommended in the November number of the last volume of the Cultivator, in reference to a disease by which Mr. Devereux of North Carolina lost a Devon bull. Mr. Grant says if the Cultivator had reached him a week sooner, it would have saved many of his animals.

Clover, Crops, &c. in Mississippi.—Extract of a letter to the editor of the Cultivator, from A. M. Mayo, Esq., dated Holmes Co., Dec. 22:—"I am this year trying an experiment with red clover; and so far, it looks well. I think it will do well; if so, it will be a great thing for our country. I am not aware of any experiments with it having been tried in our region of country. I intend making an experiment with corn sown broadcast, for fodder, next year. Millet does well with us. Our cotton crop this last season was very light in many places, owing to the worm; and, added to that, the low price of the article, makes it a poor business. We shall be obliged to alter our system of farming, if we expect to live by it."

Spread of the Potatoe Malady.—Mr. John Townsend, of Zanesville Ohio, informs us that the disease in potatoes, spoken of in the eastern papers, made its appearance in his neighborhood last season. It seemed to be generally confined to particular varieties. Mr. T. says, "a round potatoe, of a dull red color, brought from the State of New-York in 1833, suffered the most," so far as his observation extended.

Monroe Co. Ag. Society—Great Crop of Corn.—Extract of a letter from T. H. Hyatt, Esq., dated Rochester, Dec. 18:—"The Annual meeting of the Monroe County Agricultural and Horticultural Society, for the election of officers, the awarding of premiums on field crops, &c., was held in this city on the 11th inst. An interesting and elaborate report on farms, the best modes of farming, &c., was made by Mr. Langworthy, chairman of the committee appointed to examine and award premiums on the best farms in this county. The awards of the committees were but few. The most remarkable crop offered, was by Rufus Beckwith of Henrietta, being that of 126 *bushels of shelled corn per acre!* The whole Transactions of this Society for the year, are soon to appear in pamphlet form. The following are the officers elected for the ensuing year: John H. Robinson, Henrietta, President; Elisha Harmon, C. K. Hobbie, F. P. Root, V. Presidents; James P. Flogg, Bochester, Treasurer; H. M. Ward, Recording, and Thos. H. Hyatt, Rochester, Coresponding Secretary."

Prejudice.—A correspondent who dates at Lenox, N. Y., and signs "Rambler," gives us some of the objections of a very narrow-minded and prejudiced man to agricultural papers and to all improvements. It is an old saying, that "*it takes all sorts of people to make a world,*" and this saying furnishes the only evidence we are able to give, of the advantage which some men are to society at large. The man who opposes improvement, is in principle and fact a *savage*—his proper place, if he really belongs to our territory, is "west of the Mississippi"—not, however, among the Cherokees, Choctaws, or Wyandotts, for they take the Cultivator, and are rapidly advancing in agriculture and other arts—but among the Crows and Black-feet, he would probably find congenial spirits. We are not surprised that a man of the prejudice and obstinacy of the one described by "Rambler," should lose "*two thousand dollars by farming.*" The resolution he has adopted of doing all his work himself, for the future, is no doubt a good one. Under such narrow policy, the less that is done, the better—small business is adapted to a small mind.

The Apple Worm.—We give the following, from a letter from R. L. Pell, Esq.—"I have for years been at a loss to know from whence the worm was derived, which is always found in fallen fruit, or in that ripening prematurely; by accident, last spring, when my fruit trees were in bloom, a limb of an apple tree was cut off, I examined the blossoms, and discovered numerous small worms, precisely like those found in the fruit, at a later period; even many of the buds still unopen, contained a worm. I observed as the fruit enlarged, the worm eat its way into it, and caused it to fall. The season was still cold, not a fly of any description had yet appeared; the conclusion I arrived at was, that the egg had been deposited early in the autumn in the bud intended for fruit the ensuing season. Last fall I noticed my trees frequently, and invariably saw numerous winged insects flying around them, and alighting on the buds, but could not discover to what family the obnoxious one belonged. Can you throw any light on the subject?"

Continuation of Milk in Cows.—Extract of a letter from Mr. Calvin Butler, Plymouth, Ct., to the Editor: "On the subject of keeping cows in milk from year to year, I have had some experience. It is not true that cows kept constantly in milk, will, after a lapse of years fail of their milk. This depends upon the nature and disposition of the cow for milk or fattening. I kept one in milk for five years constantly, and she increased in her milk every year, and it was almost impossible to dry her when I turned her to beef. I am now milking one for the third year, which neither gains nor fails in her milk, and I presume would not, should she be milked ten years. I am milking another for the first year, which I presume will continue to gain, from year to year. My cows have been kept from the bull—not spayed."

Spaying Cows, &c.—In a late letter to the Editor, W. S. Gibbes, Esq. of Chester District, S. C., says:—"In your Nov. number, p. 357, notice is taken of spaying cattle. Mr. James Knox, an active and enterprising young farmer, and neighbor of mine, has been in the successful practice of spaying milch cows and heifers for some years past; the cows do not seem to suffer much, never lose their milk, and one that he spayed three years ago, is giving yet her usual quantity of milk. He has never lost one. This autumn he successfully spayed an ewe for me, as an experiment."

Fly in Wheat.—Mr. Wm. Whiting of New-York, sent us an extract from the Detroit Advertiser, recommending oats to be sown in the fall with wheat, four quarts to the acre, for the protection of the wheat against the fly. The argument used in favor of the practice, is that the oats come up first, and grow the most luxuriantly, and that the fly will deposit its eggs on them instead of the wheat—that the winter kills the oats, and the eggs or worms in the plants, perish. We have heard this practice recommended before, but cannot say, from experience, any thing in regard to its efficacy.

Mediterranean Wheat.—From a letter of N. J. Palmer, Esq. Milton, N. C.—"I have been trying the Mediterranean wheat for two years; the seed of which, I procured from Philadelphia. It succeeds admirably, has a very large plump grain, and makes excellent flour. It will grow much better on thin land than our May wheat, will ripen as early, and is not so liable to injury by the fly, or affected by the rust."

BERKSHIRE AG. SOCIETY.

Address of Frederick J. Betts, Esq., before the Berkshire (Mass.) Ag. Society. This address is highly creditable to its author, and the ancient and respectable society to which it was delivered. Mr. Betts' remarks on the advantages of agricultural associations, are well-timed, and appropriate. The Berkshire Society itself, one of the oldest in the country, furnishes an excellent example of the kind. To this society belongs the honor of instituting *Cattle Shows* in America—the first of which was holden at Pittsfield in 1807. Since that time they have been continued annually; each succeeding year adding new interest to the exhibitions, and increased usefulness to the society.

In relation to the duties of committees at Cattle Shows, we give a paragraph from Mr. Betts' address, which we consider particularly worthy attention:

"The reports of the *Committee of Judges* may be made a most important means of desseminating agricultural knowledge; the mere awarding premiums is a most unimportant part of their duties. To distinguish the nice shades of difference in different specimens subjected to their inspection, will of course frequently require from them close observation; and the exercise of a discriminating judgment, and in this consists their great duty to competitors. Their duty to the Society, and to Agriculture, requires that they should accurately note and specify in their reports, the individual merits and demerits, of each article inspected by them, and clearly describe the points in which the preferred article surpasses the others. The principles too upon which they award their premiums are of the greatest importance. It is by no means true that the best farm, the best animal, or the largest crop is always entitled to the *first*, or even to *any* premium. The farmer, of all other men, is bound to act upon the lesson taught his countrymen, by America's great philosopher, "*not to pay too much for the whistle,*" and though it may therefore be true, that "*the man is a benefactor of his race who makes two blades of grass grow where but one grew before,*" it is certainly equally true, that he is no *benefactor to the farmer* if his two blades triple the expense of the usual mode of raising one. Award then your premiums to him who *does the best with his means*, whether those means be great or small; and let the consciousness of doing wonders reward the ambitious aspirant for fame, who works upon other principles."

Subsoil Plowing.—The committee on Root Crops for the Worcester (Mass.) Ag. Society, states that one of their number had once seen a demonstration of the great advantages which would be derived from the more common use of the subsoil plow. Mr. Isaac R. Barbour who received the first premium for a crop of carrots, had two lots, on one of which the subsoil plow was used, and on the other, only the common plow. The difference in the appearence of the crop in favor of the subsoiled portion, was quite evident.

SEED AND IMPLEMENT STORE,
At Rome, Oneida Co., N. Y.

COMSTOCK & JOHNSON, proprietors of the above store, will be happy to receive orders for seeds of any kind, and also for all the most approved implements used by farmers.

January, 1845—tf

FOR SALE.

THE subscriber offers for sale his fine Durham bull Osceola. He is now two years and a half old, and has taken the 1st premium at two successive State Fairs; for pedigree and further description, see Cultivator, Sept. 1843.

Also, his thorough bred Stallion Young Florizel.

Watervliet, Dec. 16, 1844—tf. CLARKSON F. CROSBY.

PLOWS

OF the most approved patterns now used in this State, will be constantly kept for sale either at wholesale or retail at the Rome Plow Factory, corner of Dominick and Washington streets. The *Diamond Plow*, which received the State Society's first premium last fall, is made by us in good style. Farmers in want of Plows, Cultivators, Cradles, Scrapers. &c. are invited to call.

A liberal discount to those who buy for retailing.

Jan. 1845—tf BRAINARD, COMSTOCK & CO

FARM IN ILLINOIS.

FOR SALE—A good farm, with valuable improvements. The subscriber being about changing his business, will sell a great bargain. Also has in immediate vicinity, 2,000 acres choice land, which he will sell at a discount from government price. Address ISAAC HINCKLEY, P. M., Audubon, Montgomery Co., Illinois.

Dec. 1, 1844—tf.

SPLENDID FARM AND COUNTRY SEAT FOR SALE.

I NOW offer for sale my farm, consisting of 170 acres of the richest of the Mohawk Flats, all under improvement and in a highly productive state, together with the substantial and superbly finished brick mansion erected by the late Gen. John G. Weaver, at an expense of about $10,000. It is one and three-quarter miles from the city of Utica, on the north bank of the Mohawk, over a McAdam road. It has a beautiful orchard, garden, farm-house, barns, stables, sheds, &c., and is finely watered, and now stocked with choice Durham and grade cattle, Bakewell and Southdown Sheep, and all necessary farm implements; all of which will be sold at a great bargain to the purchaser. D. SKINNER.

Utica, January 1, 1815—3t*

FINE FARMS FOR SALE AT AUCTION.

THE property known as the Stimson Farm, situated at Galway in the county of Saratoga and State of New-York, will be sold at auction, at the Court House in Ballston Spa, on Wednesday the second day of April next, at 12 o'olock noon. It contains in the whole about 325 acres and is so divided as to make three farms, each having on it the necessary farming buildings. The roads from Schenectady to the Fish House, and from Saratoga and Ballston to Johnstown, run through the property at right angles, dividing it into four parts. The two pieces lying north of the road, said to contain about 190 acres, will be sold together. On this part are, a large hotel, capable of accommodating one hundred boarders, with the most extensive and convenient buildings for agricultural purposes. It is a favorite place of resort for families in the summer season. This part of the property will be a most desirable investment for any person desiring to connect the business of farming with that of keeping a hotel of this description.

The south eastern portion, said to contain about 90 acres, has a farm house and the necessary out buildings, with a wagon maker's and a blacksmith's shop. The south-western portion, said to contain about 50 acres, has on it a store and dwelling-house attached, farm house and barns, and is a most desirable property for any person wishing a small farm. Each farm has on it the proper proportion of woodland, and the whole is of the best quality for farming, there being no waste land, and in the highest state of cultivation. The situation is high, commanding a most beautiful and extensive prospect in all directions.

The sale will be positive and without reserve, to the highest bidder, and perfect titles will be given. The terms will be 5 per cent cash, to be paid to the auctioneer at the time of sale; 50 per cent may remain on bond and mortgage for five years, or a longer term, at 6 per cent interest, payable half yearly in the city of New-York, on the first of May and November, and the balance to be paid in cash on the delivery of the deed. For further particulars, apply to JOHN W. THOMPSON, Esq., Ballston Spa, or to J. OAKLEY, No. 77 Nassau-street, New-York.

Dated New-York, Dec. 9, 1814—3t.

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CONNECTICUT SEED LEAF TOBACCO SEED.

THE true broad and narrow Seed Leaf Tobacco Seed, selected from growth of 1844, for sale at the Seed Store of the Hartford County Agricultural Society, by E W. BULL, Seedsman.

Feb. 1—3t.

LOUISVILLE KY. SEED AND AGRICULTURAL STORE.

GEORGE, LAPPING & Co., keep constantly on hand
Kentucky Blue Grass, extra clean for Lawns,
Kentucky do. do. in strips,
Hemp seed,
Timothy,
Clover,
Orchard Grass,
Red Top.

All orders promptly attended to. MUNN & PETTIBONE,
206 Pearl St., N. Y., Agents.

FOR SALE.

THE splendid two years old Bull "Marius," belonging to Thomas Oliver Esq., of Riversdale, Sing Sing. Marius was imported in 1843 from the far famed stock of Earl Spencer, of Wiseton, Northamptonshire, and was subsequently exhibited at the State fair, held at Po'keepsie, in 1844, at which place he took the first premium of the yearlings in the short-horned class, as also that of the year olds against all classes then exhibited. Subsequently at the Fair of the American Institute last autumn, he was again awarded the first prize for the yearlings of his class. He is a Roan Bull of the most complete symmetry, and although only two years old on the 5th of last Dec., weighs about 20 cwt.

Pedigree—Marius, a Roan Bull—calved December 5th, 1842, got by Roman, dam by Waverly—gr. dam by Satalite—gr. g. dam by Cato—gr. g. g. dam by St. John—gr. g. g. g. dam by Chilton—gr. g. g. g. g. dam by the White Bull—gr. g. g. g. g. gr. dam by Favorite—gr. g. g. g. g. g. gr. dam by Duke. Signed, George Earl Spencer.

Letters, post paid, may be addressed to the subscriber.

Sing-Sing, N. Y. Jan. 28, 1845.—tf. JOHN LUMSDEN.

AGENTS FOR THE CULTIVATOR.

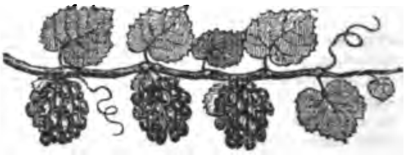
It would occupy too much room to give a full list of the Agents for the Cultivator. We would therefore state that all Postmasters are authorized to act as Agents, as well as all others who feel a sufficient interest in the circulation of our paper to induce them to act as Agents. We add a list of such Agents as have the back volumes for sale.

Auburn, N. Y.—J. C. Derby & Co. booksellers.
Alexandria, D. C.—Bell & Entwistle, booksellers.
Augusta, Geo.—C. A. Greenville & Co. booksellers.
Buffalo—T. S. Hawks, Periodical Depot.
Boston—E. Wight, Druggist.
A. D. Phelps, 124 Washington-street.
Baltimore—Dr. G. B. Smith.
Cincinnati, O.—W. H. Moore & Co. booksellers.
Erie, Pa.—T. S. Moorehead, Jr.
Halifax, N. S.—C. H. Belcher, bookseller.
Hartford, Ct.—E. W. Bull, Seedsman.
Louisville, Ky.—George, Lapping & Co. Seedsmen.
Montreal—John H. Scott and B. Brewster.
New-York—M. H. Newman, bookseller, 199 Broadway.
New-Haven, Ct.—J. M. Patten.
New-Orleans—W. M'Kean, bookseller.
A. Hodge, Jr. Esq.
Philadelphia—Landreth & Munns, Seedsmen.
Pittsburgh—J W. Cook, bookseller.
Providence, R. I.—A. H. Stilwell, bookseller.
Quebec, L. C.—J. Wheatley, Stationer.
Rochester—D. B. Dewey, Arcade Hall
Richmond, Va.—R. Hill, Jr. & Co.
Rome, N. Y.—Comstock & Johnson.
Utica, N. Y.—Wm. Bristol, Druggist.
Washington City—J. F. Callan & Co. Seedsmen.
Wilmington, Del.—Jas. La Roche.

PROUTY & MEARS'

PATENT Centre Draught Self Sharpening Ploughs, from $6 to $13 each—Subsoil Ploughs at $8, $10, and $12 each—Corn Planters $12 to $15—Straw Cutters in variety—Meat Cutters and Stuffers—together with every implement wanted on the farm or garden. Also a full assortment of Vegetable, Flower and Field Seeds, crop of 1844, warranted of the best quality and true to name; among them are several new and superior kinds, as Seymour's Giant Celery, Union Head Lettuce, &c. &c. Fruit Trees, Bulbous Roots, &c., for sale at the Philadelphia Agricultural Ware House and Seed Store, No. 194 1-2 Market Street, Phil'a, by D. O. PROUTY.

January 20—2t.



ISABELLA GRAPES, of proper age for forming Vineyards, propagated from and containing all the good qualities which the most improved cultivation for over ten years has conferred on the Vineyards at Croton Point, are now offered to the public. Those who may purchase will receive such instructions as will enable them to cultivate the Grape with entire success, (provided their location is not too far North.) All communications, post paid addressed to R. T. UNDERHILL, M. D., 400 Broadway, New York, will receive attention. He feels quite confident that he has so far meliorated the character and habits of the Grape Vines in his Vineyards and Nurseries, by improved cultivation, pruning, &c., that they will generally ripen well and produce good fruit when planted in most of the Northern, and all the Western. Middle and Southern States.

January 20.—2t.

PRINCE'S LINNÆAN BOTANIC GARDEN

AND NURSERIES,

Flushing, L. I., near New-York.

WILLIAM R. PRINCE & CO'S New Descriptive Catalogues of Fruit and Ornamental Trees and Plants (34th edition,) *with prices much below those usually charged*, and comprising additions of above 500 select varieties of Fruits, and 1200 varieties of Ornamental Trees, Shrubs and Roses, not in any other American Nursery, will be sent to every post paid applicant. The cost of the present edition, is above $700, and it is the most complete ever published.

Also, Prince's Treatise on Fruits, $2,00, and on the Vine, $1,50, and on Roses, 50 cents. Orders will be executed in a superior manner, and forwarded as ordered. WM. R. PRINCE & Co.

Flushing, December, 1844—2t.

N. B. The public are cautioned against a spurious assumption of our title and name by Winter & Co.

HUSSEY'S REAPING MACHINE.

THE subscriber has now brought his Reaping Machine to the highest state of improvement. The cutting of four harvests has proved the last improvements to be permanent and durable. The four horse machine is warranted to cut from 15 to 20 acres per day—price, $170. The light two horse machine is warranted to cut from 12 to 15 acres per day—price $100. Medium size, price, $140. Farmers who intend getting machines to cut their next harvest, will please send their orders soon. References are given in the Dec. number of the Cultivator, 1844. Also for sale, my corn and cob crusher, an improved article; price 25 dollars. OBED HUSSEY.

Baltimore, Nov. 1844—4t.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES.

VOL. II. ALBANY, MARCH, 1845. No. 3.

THE CULTIVATOR
Is published on the first of each month, at Albany, N. Y., by
LUTHER TUCKER, EDITOR AND PROPRIETOR.

ONE DOLLAR A YEAR.

SEVEN copies for $5,00—FIFTEEN copies for $10,00—all payments to be made in advance, and free of postage.

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OFFICE IN NEW-YORK CITY, AT
M. H. NEWMAN'S BOOKSTORE, No. 199 BROADWAY,
where single numbers, or complete sets of the back volumes, can always be obtained.

☞ This paper is subject to newspaper postage only, being one cent within the state or within 100 miles of Albany, and 1½ cent for any greater distance.

THE CULTIVATOR.

TO CORRESPONDENTS.

COMMUNICATIONS have been received since our last, from C. D., B. P. Learned, S. Weller, P—, J. P. Norton, D. G. Mitchell, A Lady, Solon Robinson, W. Orcum, Agricolaris, Yarrow, A. S. of Oakwood Farm, Amherst, S. B. Buckley, S. W. Jewett, B., S., Charles Colfelt, Dairyman Farmer, A Country Typo, H. W. S. C., Indicator, A Laboring Man, A Subscriber, C. Osborne, P. Smith, Jr., Fishkill Landing, S. Camp, A Subscriber, D. S. Curtis, G. N. Blakeslee, H. A. Parsons, Gibson & Ritchie, A. C. Stevenson, M. Adams.

We are under obligations to the American Institute, New-York, for a handsome pamphlet copy of the "Proceedings of the National Convention of Farmers and Gardeners held at the American Institute," in Oct. last—To J. R. BAILEY, New-York, for the "Leicester Journal," containing very full accounts of the anniversary meetings of the Rutland and Leicestershire (England) Ag. Societies—To Hon. H. L. ELLSWORTH, Com. Patents, for two packages of various kinds of seeds—To Hon. WM. L. GOGGIN, M. C., for his Address before the New London (Va.) Ag. Society—To J. W. LINCOLN, Esq. for the Transactions of the Worcester County, (Mass.) Ag. Society for 1844—To R. R. PHELPS, Esq. for the Transactions of the Hartford Co. (Ct.) Ag. Society for 1844—To LORENZO BULL, for a copy of the beautiful Diploma of the Hartford Co. Ag. Society, and for copies of the Transactions of the same Society for 1842 and 1843—To HENRY WATSON, for a copy of the same—To Hon. LEVI WOODBURY, U. S. Senate, for his Address before the National Institute at Washington, on the 15th of last month. To ARTEMAS HALE, Bridgewater, for Reports of the Plymouth Co. Ag. Society—To E. H. PEASE, bookseller, of this city, for copies of Johnston's Agricultural Catechism—To F. DWIGHT, for a copy of his Report on the Common Schools of Albany County.

CRITICISM.—The criticism of "Amherst" is received. It is certainly much to the point, but we would remark that many who send articles for the Cultivator, are not practiced writers. *Facts*, of the most valuable kind, are frequently communicated in a style not the most laconic or beautiful. Justice, however, compels us to say that we have found the objections of our correspondent in regard to "redundant expressions," and "circuitous style," not generally more applicable to those who write but little, than to those who write much. The hints of Amherst, are nevertheless good, and we will endeavor to profit by them.

☞ Several communications in type for this month, are crowded out to make room for the Prize List of the State Agricultural Society.

Mr. HATHAWAY, Rome, will have seen that the extract he sent us was noticed in our last number, p. 71.

J. H., *Guelph*.—The 'Northern Light,' has been discontinued. What shall we do with the $2?—Shall we advertise the stock you wish to dispose of?

J. P.—Your request shall be attended to, and the necessary preparations made in due season.

MONTHLY NOTICES.

NEW-YORK STATE AGRICULTURAL SOCIETY.—The Executive Committee met on the 13th and 15th February, and completed the premium list, &c., which will be found in another part of this number. The next show, it will be borne in mind, will take place at UTICA, on the 16th, 17th and 18th days of September next. We would call particular attention to the premium list, which in some respects, we think, is improved on that of former years. The central position of Utica is certainly favorable to a wide competition in all the departments, and we are confident the people of that thriving city will omit nothing on their part to make the show in all respects worthy of our great state. Come on, then, farmers, and give us the opportunity of comparing the products of your farms at this grand *rural jubilee*.

AGRICULTURAL LECTURER.—We are pleased to inform the public that the Executive Committee of the New-York State Agricultural Society have made an arrangements with the Corresponding Secretary, Dr. D. LEE, to make a tour through various portions of the state, for the purpose of collecting useful information, and giving occasional lectures on agricultural subjects. We have no doubt his visits will be received by the farmers with warm approbation, and that due notice only will be required to insure the attendance of large audiences to hear his lectures. Dr. Lee is at present a member of the Assembly, and during the session may be addressed here on any matters pertaining to his proposed tour.

THE CULTIVATOR FOR PREMIUMS.—We have recently received orders from the following Societies for The Cultivator to be distributed as Premiums:

Orange Co. Ag. Society, N. Y.,........	7	copies.
Chautauque Co. Ag. Society, N. Y......	17	"
Miami Co. Ag. Society, Ohio,.........	10	"
Ohio and Brooke Counties Society, Va.,	15	"
Coshocton Ag. Society, Ohio,.........	7	"
Herkimer Co. Ag. Society, N. Y.,......	36	"
Cortland Co. Ag. Society,. "	31	"
Seneca Co. Ag. Society, "	25	"

We would suggest to the Managers of County Ag. Societies, who will soon convene to make out their Premium Lists for the present year, whether they could in any way better promote their objects, than by including in their premium lists 25 to 40 copies of The Cultivator.

Liberal Subscriptions.—Hon. J. J. McKay, M. C. from North-Carolina, has renewed his subscription for *one hundred* copies of "The Cultivator," for gratuitous circulation among his constituents. James Sloan, Esq. of the same state, is also a subscriber for *one hundred* copies.

Solon Robinson.—We give this month, the first of a series of Letters from this veteran, from the South and South West, which we doubt not will be read with interest in all sections of the country. This letter was intended for our Feb. number, but did not reach us in season. We have a second letter, dated at Glenfinlas, Missouri, 26th Jan., which will appear in our next.

Suffolk Pigs.—In our notice of the Massachusetts State show at Worcester, last fall, we spoke of some Suffolk swine, imported by Mr. William Stickney, of Boston. In a letter lately received from Mr. S., he informs us that they have proved to be a very valuable variety. Some of the half bloods, killed the past winter, at the age of ten to eleven months, weighed 300 to 375 lbs. each. We notice a letter of Col. Jaques in the Massachusetts Plowman, in which he thus speaks of the Suffolk pigs: "They are of good promise, and if judiciously crossed with some of our varieties, may make great improvements."

Hops.—There were inspected in this city during the last year, by William Armsdell, inspector, 1050 bales of hops. These were raised, principally, we are informed, in the counties of Otsego, Oneida and Madison, in this State. They are said to have been well matured on the vine, of rich flavor, and well secured, being of a quality that would generally pass for first sort. Gurdon Avery and Charles D. Palmer of Oneida, Solomon Root of Madison, Gilbert Conrad and William Hinds of Otsego county, are mentioned as having produced a superior article.

Carrots.—In our notice of Mr. Newhall's farm in the Jan. No., we spoke of the culture of carrots, and stated that the crop we saw growing in October would probably amount to eight or ten hundred bushels per acre. By a note of Mr. Newhall's in the New-England Farmer, Jan. 29, we learn that the crop was carefully measured, at harvesting, and was found to be 880 bushels per acre.

Correction.—In our notice of Mr. Newhall's soiling system, we mentioned that rye, which was the first thing cut in the spring, lasted till corn, sown or planted for fodder, would answer to cut and feed. In his note to the N. E. Farmer, Mr. N. states that we were under a slight mistake. There is usually a short time after the time for using rye is passed, that he feeds with green clover, before the corn is used.

Early Corn.—Extract of a letter from B. Brewster, Esq. Montreal.—"Should an opportunity offer, I shall send you a few ears of Indian corn, similar to your Dutton, but much earlier. Time, the past year, 94 days from planting to harvesting—produce 96 bushels to the acre." We shall be greatly obliged, if Mr. B. will send us half a bushel or bushel of ears, by express, and charge expenses to our account.

☞ The *Germantown Telegraph* of Jan. 29, copies an article of two and a half columns from the Cultivator, and invites the attention of its readers to it, without informing them from whence it was copied. It appears, in fact, as original in the Telegraph, and will probably be copied from that paper and credited to it, as several of our articles have heretofore been, which appeared in that paper leaded, without credit. The Telegraph will understand why the exchange is discontinued.

Samples of Wool.—A. C. Stevenson, Esq. Green Castle, Ia. says—"I would like to have samples of wool from a few of the best fine wooled flocks in your vicinity, and if any of your sheep growers will send me samples and prices, I will take some pains to exhibit them."

Agriculture in New-Brunswick.—By the St. Andrews Standard, we have the twenty-fifth report of the Charlotte County Agricultural Society, with the list of officers, &c. for the present year. It appears that this society has rendered important benefits by the introduction of seeds, implements, and stock of various kinds; and the report informs us that a commendable spirit of improvement is observable in the various departments of agriculture. We rejoice in their progress.

Mount Hope.—The editor of the *Troy Whig*, in noticing the February number of the Cultivator, and its beautiful view of "Mount Hope," after alluding to the proprietor as "among the most distinguished breeders of Durham cattle in the United States," says: "Mr. Prentice is moreover a liberal patron of the fine arts. In the hall of his mansion at Mount Hope are the four marble statues of the Seasons executed for Mr. Prentice by Henry Kirke Brown, the young American sculptor now in Italy, and several marble busts by the same artist. It is by the liberality of Mr. Prentice that Mr. Browne is enabled to prosecute the study of his profession abroad."

Potatoe Rot.—An exchange paper suggests that the rot in potatoes may be "occasioned by the worm that destroys cucumber vines." We have seen no satisfactory evidence that this trouble is caused by *any* insect. The most minute examinations have failed to trace the rot to animal life in any form.

South Carolina Wine.—The Savannah Republican states that Dr. Sidney Smith, of Robertsville, S. C., has lately exhibited eight samples of wine made from the pure juice of the grape. Dr. Smith has 800 gallons of these wines, which are pronounced excellent, particularly for all medicinal and culinary purposes.

Potatoes in Hills and in Drills.—The Plymouth co. (Mass.) Ag. Society paid premiums last year for experiments to ascertain the best mode of planting potatoes. The following are some of the results:

	In hills.	In drills.	
P. Bassett, of Bridgewater raised	363	425	bu. per acre.
Paul Hathaway, Middleboro', -	331	396	"
B. Hobart, - - - - - - - -	270	310	"

Neither the relative quantities of seed, nor the difference in the expense of cultivation for each mode, are mentioned.

FOUNTAINS.

Few things add more to the beauty and interest of gardens, than a diversity in the play of water. In hot, sultry weather, especially, it contributes to cool the air, as well as enliven the prospect. Water spouting from an ajutage, never attains entirely the height of the reservoir, being prevented by various concurring causes:—1st, friction in the tubes; 2d, friction against the circumference of the aperture; 3d, the resistance of the air; its weight obstructs the rising column. Thus the Emperor Fountain, lately erected at Chatsworth, with a fall of 381 feet, only raised a jet 267 feet in height. The above causes account for the loss; as all are aware if a pipe were laid to a corresponding height, the column of water would then rise to the height of the place from whence it was supplied. In order to make large jets rise higher than small ones, the conduit pipe must be large enough to furnish a sufficient quantity of water to supply them. History informs us that the ancients were far before us in this delightful ornament. Greek cities were adorned by them; in Corinth, there were several; in Rome, Frontenus was employed in erecting fountains; Pompeii had many, some of which remain to this day. The fountain of Trevi, and the Pauline fountain at San Pietro, in Montono, are immense piles of architecture. The London Gardener's Chronicle, from which we have condensed the above remarks, gives the following table in reference to some of the principal fountains in Europe. The same paper also mentions an improved hydraulic ram, used by Mr. Roe, in which water can be raised with a fall of ten feet, to the height of 300 feet without labor.

The Emperor Fountain at Chatsworth, height of jet,..................................	267	ft.
Wilhemhœhe Fountain, in Hesse Cassel,.....	190	
Fountain St. Cloud,..........................	160	
Peterhoff, Russia, ...	120	
Old Chatsworth,..............................	94	
Versailles,..................................	90	

TEN HILLS FARM.

This farm, the residence of Col. Samuel Jaques, is in Charlestown, about three miles from Boston. The location is one of the finest in the country. The Mystic river, which is here navigable for vessels of the largest class, forms the northern boundary, and the Middlesex canal and Medford turnpike pass through its center. From a kind of promontory which embraces the northern part of the farm, and around which the Mystic makes a graceful curve, there rises, with gentle acclivity, a hill from whose top is presented a landscape view of most exquisite beauty and interest. Here, at once before the eye, is Charlestown, with Bunker Hill and its towering monument—a little beyond, is the city of Boston, with its harbor and shipping, and the bay, with its numerous green islands—scattered around, are the many handsome towns and villages which constitute the suburbs of the New-England metropolis; the highly cultivated country, with all its varied features of hill and dale, forest and field, filling up the picture to the horizon on every side. But no description can do full justice to the diversified beauty of the scene.

Contiguous to this farm is Mount Benedict, on which stood the Ursuline convent which was burnt by a mob on the 11th August, 1834. The blackened and crumbling walls, with a scattered remnant of trees and shrubbery, are all that now remain of the objects which once adorned this memorable spot.

Many interesting reminiscences are associated with Ten Hills. The first vessel constructed in Massachusetts, called "*The Blessing of the Bay*," was built *here* in 1631, and a part of the wharf at which she was moored, is still to be seen! The first house here, was built by an English gentleman, in 16—, and a door, which is believed to have belonged to this house, now constitutes one of the hall-doors of the present mansion! The latter was built by the late Gen. E. Haskett Derby, who resided here for several years.

Col. Jaques has long been extensively known as a skillful breeder of various kinds of stock. Some of the first premiums of the Mass. State Ag. Society on Merino sheep, were awarded to him. He was also one of the first introducers of the Leicesters and South Downs—having received a premium of fifty dollars for the best Leicester buck in 1822; and from the year 1816 to 1834, he received from the Mass. Ag. Society in premiums on Merino, Leicester, and South Down sheep, the handsome sum of three hundred and twenty-five dollars. He was also the owner of some of the first of the improved Short-horn cattle that were brought to this country. Among these were the bull *Cœlebs* and cow *Flora*, imported in 1819. They were derived from the celebrated herd of Mr. Mason, of Chilton, Durham. From this pair, Col. J. bred several animals which were much admired—some of them received the highest prizes of the Mass. State Ag. Society,* and sold at prices from $300 to $500 each, which at that early day were considered very high.

In 1823, Col. Jaques sold his bull *Eclipse*, then two years old, to the Agricultural Society of Montreal, for $500. The Montreal papers, in noticing his arrival there, declare him to have been superior in points and appearance, to any thing which could have been anticipated. [See extract from the Canadian Courant, in the New-England Farmer, vol. 1, p. 350.]

According to the documents which accompanied the importation of Cœlebs and Flora, (copies of which have been placed in our hands,) the former was the grandson on both sides, of Mr. Colling's bull *Comet*, which was sold for a thousand guineas. Flora's dam and sire were also both by Comet. Her dam was said to have given 33 quarts of milk per day. Cœlebs was a very popular bull, and for several years earned his owner the round sums of from $500 to $600 per year; and during the time Col. J. owned him, no less than three thousand two hundred and thirty dollars were received for his services. Many of his progeny were remarkable as milkers. In a letter received from Col. Jaques, dated Jan. 16th, last, he says,—"The different strains of Cœleb's blood are now daily talked of, and are eagerly sought after, in all parts of the country where his blood has been spread—particularly by our *milk-men*; and I am frequently called upon to go and see a fine cow whose blood can be traced back through several generations, to Cœlebs; and not unfrequently do I find a fine animal of the fifth or sixth generation, showing points almost equal to a full blood. Mr. Leonard Stone, of Watertown, one of our best and wealthiest farmers, says he had two cows by Joshua Coolidge's premium bull, [a son of Cœlebs, which took a premium at Brighton in 1822,] that proved the best milkers he ever had, and he added that he would now be very glad to obtain a number of such cows, at $100 each."

There can be no doubt that Cœlebs caused a great improvement in the stock of Massachusetts and other sections where his progeny were introduced.* The variety to which Col. Jaques has given the name of "Cream pot breed," originated from a cross of Cœlebs with two remarkable cows selected from what is called the native stock of the country.

The Cream-pot cows are distinguished for the quantity and particularly for the *richness* of their milk. Particular trials have been made with some individuals of this stock, and they have given at the rate of from seventeen to twenty-one pounds of butter per week. Col. J. has a few cows of this breed now on his farm. He would have had more, but the tempting offers of a hundred dollars a piece for his heifer calves, have induced him to part with most of them at an early age. We were shown the milk and cream from the cow *Gem*, and one or two others. The cream is of a very rich yellow color, and of uncommon thickness and tenacity. That which had risen on pans of milk that had only stood eight hours, was so firm that after being separated from the edge of the pan, it would almost hold together to be lifted by a fork.

The shape and points of these cows are remarkably good. Gem, which may be considered a fair specimen of the best of the family, is a very large bodied short-legged cow, with long, wide and deep hind quarters, a rich yellow and mellow skin, large milk veins and udder. Her color is dark red, which is a family characteristic. Her head and neck have not quite that fineness of some of the pure Durhams or Ayrshires, but her body, especially the hind quarter, is very near *right*, and her *handling* is first rate.

Judging from what we have seen, we should say, to sum up the qualities of the Cream-pots, that for the New England climate, lands of middling quality, and the combined purposes of the dairy, the shambles, and the yoke, they are not probably surpassed by any other stock.

In feeding his stock, Col. Jaques practices close economy. He has sometimes kept a herd of cows for the purpose of supplying milk for the market. The following is a system of feeding which he has followed with success. For 30 cows, cut with a machine 30 bushels for one feed; one-third common or English hay, one-third salt hay, and one-third rye or barley straw; add 30 quarts of wheat-bran or shorts, and 10 quarts of oat and corn meal moistened with water. One bushel of this mixture is given to each cow in the morning, and the same quantity at noon and in the evening. In addition to this, a peck of mangel wurtzel is given to each cow per day. This mode of feeding has been found to produce nearly as much milk as the best grass feed in summer. When no wheat bran or any kind of meal is given, the hay is fed without cutting.

Col. Jaques has favored us with some very valuable papers in reference to the introduction and improvement of stock in New-England, and other matters, from which we design to form a separate article.

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* No less than six hundred and forty-one dollars, were awarded in premiums, by the Massachusetts State Agricultural Society, to Cœlebs, Flora, and their descendants, from 1819 to 1835. Flora had fourteen calves—the first in 1819, and the last in 1833.

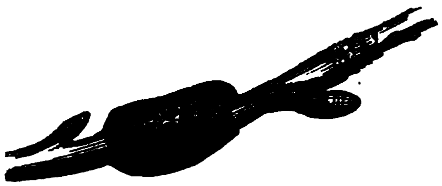
* The late Hon. John Lowell, in his Report on Bulls and Fat cattle at the Mass. State Show at Brighton in 1824, observes—"On the whole it must be obvious that Cœlebs has done much for the amelioration of our stock. His progeny are certainly fine." [See Mass. Ag. Repository and Journal, vol. 8, p. 221.] The same gentleman, in an article on the improvement of the breed of cattle by the importation of foreign stock, (Mass. Ag. Repository and Journal, vol. 8, p. 311,) makes the following remarks—"While Col. Jaques, the most successful, and the most intelligent of our breeders, who, under great disadvantages of location, seems to rival the celebrated Bakewell, in his skill and attention, can sell his pure breed, as he has done this spring, at $300 for an eight months old bull-calf, there can be no doubt that the experiment will be fairly tried."

THE ORCHARD CATERPILLAR—TIMELY CAUTION.

Many of our readers will recollect the extensive injuries committed on the apple-trees of this country, several years ago, by the common orchard caterpillar. Either from the unfavorable seasons or from some other cause, they subsequently disappeared in a great degree, and for a few years past we have been very little troubled with them. But they are now again on the increase; in the summer of 1843 there were some occasionally to be seen; last year they had multiplied very considerably; and present indications promise very severe damage next summer.

What are those indications? And are they sure?

They are the numerous nests of eggs, scattered thickly over the apple-trees, in all orchards, at least in the western part of the State, and doubtless in the other portions; and unless these are destroyed either accidentally or purposely, before next spring, the owners of orchards may expect trouble.



Caterpillar's Nest—(Fig. 23.)

One of these nests of eggs is accurately represented by fig. 23, encircling the branch. The eggs are first laid closely round the branch, and afterwards covered over with a water-proof varnish; in the form of numerous small vesicles or bubbles, like the scum on boiling molasses, the numerous air-cells forming a non-conductor of heat and effectually protecting the eggs from the greatest severities of winter. Sometimes they only extend partly round the branch. The number of eggs, each one producing a caterpillar, is from about three to five hundred in each nest, most of which usually hatch. They are laid in the latter part of summer and early in autumn. They remain until the following spring, and the young caterpillars come out just as the leaves of the apple are bursting from the buds. At this time, a whole nest of five hundred are not so large in bulk as a single caterpillar when fully grown. They increase rapidly in size as the leaves expand, and in a few weeks, one nest of them will completely defoliate a large branch. The consequence is, that neither the branch itself, nor the fruit it contains can grow and mature. Where there are several nests on a tree, the crop is very seriously lessened in size and quality.

The number of remedies are in proportion to the extent of the evil. The usual course is, first, to leave them unharmed until they become large, vigorous and hard to kill; and until they have already done considerable mischief. They are then beaten off by whips; threshed off by poles, wound upon long sticks while in their webs, and crushed; scoured off by circular brushes; whitewashed with lime; anointed with soapsuds or strong ley; shot or blown off with gunpowder; or swept off clean while young by ascending a ladder and grasping them with both hands. The latter appears to be the most effectual of these modes. Many would prefer first covering their hands with mittens, though we know a distinguished cultivator who fearlessly takes a nest at any age, and grinds it in his ungloved hands till all are destroyed.

But *an incomparably better mode* is to take a basket in one hand; a long and light pole, with a pair of clipping shears worked by a cord at the end, in the other; and pass through the orchard any time during autumn or winter, clipping off all the nests of eggs, throwing them into the basket, and afterwards burning them. In the absence of shears, a *very sharp*, hooked knife, set in the end of the pole, will answer nearly as well. A day when no bright clouds are overhead, should be selected, to prevent pain to the eyes. A little practice will enable the operator to see them at a glance, as they are generally within a few inches of the extremities of the branches. Every nest thus removed, done in two or three seconds, effectually prevents a nest of caterpillars next spring, without the danger of stragglers escaping, which is nearly always the case after they are hatched. The expedition of this mode is another chief recommendation.

The only objection to this mode is, that it gives such a fine opportunity for the pranks of that vexatious old thief "*Procrastination.*" For it may be done "*any time*" through autumn and winter, and hence is neglected for the same reason that the old man near Niagara falls had never seen the cataract, because he could go and see them "any day."

FASTENINGS FOR STALL CATTLE—(Fig. 24.)

Some of our readers may be familiar with the following mode, but its convenience, simplicity and effectiveness, render it worthy of more general adoption.

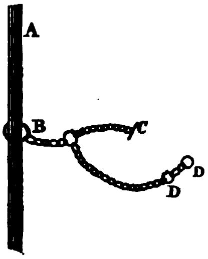


Fig. 24.

Two cows will occupy one stall six feet wide. An upright pole, A. is placed near the partition on each side, to which the animal is fastened. The cross-bar C. at the end of the chain, hooks into one of the rings D. D. and holds the animal—into the outer ring for a large, and into the inner ring, for a small animal; the sliding ring B. fastens the whole to the upright post, and while it permits the cow either to stand up or lie down freely, it prevents her from making war on her neighbor, standing with her side by side.

THE APHIS, OR PLANT LOUSE.

A friend desires us to give some information in regard to the extirpation of the aphis from rose plants, &c. Solutions of soap, tobacco-water, or tobacco-water and soap-suds mixed together, have been used with success. Flour sulphur dusted on the plants with a swan-down puff, and fumigations with sulphur and with tobacco, have been found effective. Decoctions of elder leaves and of cayenne pepper, are likewise useful. When the insects first make their appearance on the plants, they are mostly on the ends of the twigs or branches, and they may then be easily got rid of, by plucking off the leaves to which they are attached; or the branches may be bent into vessels containing some of the above solutions, and the insects thus killed. In using the liquids on the plants, some little force is necessary to insure the desired effect. A syringe, with a nose like that of a watering-pot, is the best contrivance for this purpose. Willis's syringe, which is for sale by J. Breck & Co. Boston, is well recommended.

Some other insects are troublesome on rose-plants. The Rose Scale, (*Aspidiotus rosa*,) lives on the stems and old twigs of rose-trees, which are often entirely covered with them, and look mouldy. When numerous, they are very destructive. Kollar says the best way of getting rid of them, is brushing them off with strong brushes before the plants sprout.

The *rose-moth* is also a troublesome enemy to the rose. From its smallness and peculiarity of form it is easily overlooked. Kollar thus describes it: "If the new leaf shoots are closely examined, a little brownish scale is found here and there attached to them; and on nearer inspection, we shall be convinced that it is a little case, in which a worm, the larva of a small moth, is concealed, which gnaws the tender shoots. When it has devoured one shoot, it removes with its house, and attacks another, and thus in a short time, one of these larva can strip a whole branch of its shoots. The larva which lives in the little case is only a few lines long; yellow, with a black head and spotted collar," &c. To preserve rose-trees from this enemy, Kollar directs that the small cases in which the moth is enveloped, be looked for in early spring, before any foliage is developed, when an experienced eye will discover the insect. They should be taken off and crushed immediately, for if left, they will reascend the tree.

FACTS IN FARMING.

Nothing is more agreeable to us, than to meet with observing, practical farmers, from whom we can gather valuable facts. One day in January last, we called on Mr. WILLIAM MERRIFIELD, who lives in Guilderland, about sixteen miles from this city. The weather being inclement, and the ground covered with snow, we could not go over the farm to examine the soil and mode of management, but we had the pleasure of seeing his cattle, sheep, hogs and poultry, and of obtaining from him some useful hints in relation to farming operations.

CATTLE.—Mr. Merrifield is a native of Devonshire, England, and he informs us that the dairymen in that district were in the habit of crossing their Devon stock, occasionally, with the Jersey-Island, or Alderney breed; the result of which was, a great improvement in the milking and butter making qualities.

Mr. Merrifield states that about thirty-five years ago, the late Chancellor LIVINGSTON had some imported cattle called Devons, but whose color, points and qualities, indicated that they had a dash of the Jersey blood. They were excellent for the dairy. Mr. M. had the good fortune to obtain a heifer of this stock, from a gentleman to whom it had been presented by Chancellor Livingston. She proved a first rate butter cow.

Several years after this, Gen. SOLOMON VAN RENSSELAER, of this city, purchased two bulls and twelve cows of Gen. WILLIAMSON, of Ontario county. One of these bulls was called a Short-Horn, and the other a Long-Horn; but Mr. Merrifield has no doubt that the latter was a *Hereford*, as he had the red color, white face, and other characteristics of the Hereford race. The stock bought of Gen. Williamson, were said to have descended from animals imported by him from England. Mr. Merrifield crossed the stock which came from the (so called) Devon heifer with two bulls from the herd of Gen. Williamson, and has kept the stock thus derived to this day, with no other mixture than a slight cross with the short-horns of the late Matthew Bullock, Esq.

Mr. Merrifield observes that the blood of the Hereford bull (as he calls him) above mentioned, must have been very *strong*, as his descendants, down to the present time, show many of his prominent characteristics, though they may have no more than a sixteenth or thirty-second part of his blood. Mr. M.'s stock look well, and *do* well for the dairy, and have generally good constitutions, with a fair disposition to fatten. A three year old heifer of his, is really "hard to beat," for a combination of qualities that constitute a profitable animal. A few years ago, Mr. M. had four cows, all four years old. He tried the milk of the four cows for a few weeks, while they were kept entirely on pasture feed, and they made, on the average eleven pounds of butter each, per week.

SHEEP.—Mr. Merrifield has a small flock of excellent long-wooled sheep. They were originally Leicesters, derived from the flock of Mr. Dunn, but latterly Mr. M. has worked in the blood of the Cotswold. Last season, he sheared sixteen ewes, (each of which reared a lamb,) four bucks, two wethers and four yearlings, and they gave an average of seven pounds of perfectly washed wool per head, which sold at thirty and a half cents per pound—making the value of the fleeces two dollars thirteen and a half cents each. One yearling buck sheared eleven and a half, and a three years old buck ten a half pounds. Mr. M. has had a buck which sheared twelve pounds per fleece, and Mr. Dunn had one that sheared fifteen pounds, of one year's growth. Mr. M. has frequently fatted wethers of his flock, and they have sometimes weighed as high as forty-five pounds per quarter, bringing (sold on the farm) from ten to fifteen dollars per head.

SWINE.—Mr. Merrifield has a first rate stock of swine. They are a cross of the Cheshire (from stock imported by Mr. Corning) and the Mocha. They have small heads and legs, with very large bodies, and can be made fat at any age with small expense. He was feeding his breeding stock almost entirely on raw carrots, yet they were fat to a *fault*. He has a boar, nineteen months old, whose superior, every thing considered, we think we have never seen. The average weight of these hogs, tolerably fattened, has been, at six to eight months old, 175 to 200 lbs., and at eighteen months old, 400 lbs.

POULTRY.—Mr. Merrifield showed us two breeds of hens—a large sort, evidently a cross of the Java and Malay, and the Game. The latter are as handsome in shape, and as fierce in appearance, as any we have seen.

SPRING WHEAT.—Mr. Merrifield has for many years sowed more or less spring wheat. He finds it a rather more sure crop on his land than winter wheat. Of late years, however, it has often been injured by the worm, or maggot, in the head, (*Cecidomyia tritici*,) improperly called "weevil." Late sowing, for spring wheat, is the best remedy against this enemy. Mr. M. has had the Italian spring wheat eighteen years, and by taking great care to save the plumpest and heaviest for seed, it has much improved, become more hardy, &c. He has now a quantity of this seed wheat, which is very clean, a few bushels of which he would spare.

POTATOE ROT.—Mr. Merrifield's potatoe crop has suffered much from the prevailing malady for two years, particularly the last. He has as yet found no remedy against it. He has made fair experiments with lime, put on the seed at planting time. It has done no good whatever, so far as could be seen. Last year he caused some of the potatoes to be thoroughly rolled in lime, just before planting them. The whole crop rotted without any regard to the lime. This is worthy of notice, as it has been by some supposed that lime would prevent the rot.

CUTTING GRAFTS.

Lord Bacon said very truly, "When nations arrive at civility and elegancy, men come to build stately, sooner than to garden finely, as if gardening were the greater perfection." Yet the most of farmers who expend one to two or three thousand dollars or more on a fine dwelling, think it extravagance beyond sufferance, to expend one or two hundred dollars to have a good, pleasant, profitable garden, for themselves, wives and children. And no part of the "greater perfection" aforesaid, is more neglected, than that appropriated to the cultivation of first rate fruit. How much better to have rich, sweet and superb cherries for one or two months in the early part of summer, than only the common pie cherry, whose only taste is its intense sourness; and apricots, almost equal in flavor to the most delicious peaches, and ripening weeks before the earliest peaches are thought of; and melting pears before harvest, and so on in succession till mid-winter; and the finest peaches all the autumn; and other fruits added, the whole making out a complete circle of succession the whole year round.

Now, those who have worthless, or second or third rate trees, should forthwith prepare to graft better into them. Now is the time to cut the grafts, which may be collected any time during winter, if they are well preserved till spring. No pains should be spared in getting the very best kinds; some money and a few long rides will be well employed for this purpose. If the fruit can be examined before the kinds are chosen, it may be done much more satisfactorily;—although those who are not familiar with good fruits might make some blunders. We have known some cultivators, when travelling from home, and very hungry, select as delicious some very contemptible sorts, which their keen appetites led them to pronounce delicious.

To preserve grafts till spring, the following mode is perhaps the best, as it is uniformly successful, and of very easy performance: Procure a wooden box, of a size about twice as large as will contain the given bundle of grafts, and open on one side; put the grafts into it, and fasten them by cross sticks as far as possible from the open side. Then dig a hole into the ground to receive the box with its contents; place the open side downwards, and cover the whole with earth till wanted. Two or three inches of earth over the top of the box are enough. A dry spot of ground should be selected. In this way the grafts are kept damp enough, without being wet by actual contact with the soil.

Timber and corn cannot be grown together with advantage.

SPRING GRAIN.

Excepting the liability of spring wheat to be attacked by the insect improperly termed "weevil," we believe it may be assumed as a rule, that spring grains generally succeed best when sown as early in the season as the ground can be brought into a proper state to receive the seed. For oats, in particular, and especially on light soils, our experience leads us to prefer an early seed time. In this latitude, the ground frequently becomes so far settled during this month, that warm, light soils may be sown. The proper quantity of seed per acre, is a matter on which much diversity of opinion prevails. From one and a half to *five* bushels of oats are sown by different farmers. In our opinion, the quantity of seed should be varied according to the nature of the soil, and the time of sowing; so that no fixed rule can be laid down. Of the grain we are now speaking of, we should use from two to three bushels per acre, in the ordinary mode of sowing. And we would here remark, that our experience has shown that *less* seed is required on *rich* than on thin soil. The reason is this: That in the first case the abundant food the plant receives induces it to *tiller*, or spread; whereas in the latter case but a single seed stem, perhaps, is thrown up. It should therefore be made an object to sow on thin land as much seed as will be sure to cover the ground at once with a sufficient number of plants, for if this is not done, weeds, or some foul growth, will be sure to infest the soil to the injury of the crop.

As regards the practice of sowing four or five bushels per acre, as we have mentioned is sometimes done, we must confess we have seen no satisfactory evidence of its expediency.

For barley, a loamy soil is considered preferable; we have, however, seen good crops grown on quite stiff clays, properly drained and worked. We have sown from two and a half to three bushels per acre.

For wheat, loamy soils, which contain some lime, are best. We prefer sowing about two bushels of seed to the acre. We remarked above, however, that the quantity of seed depended somewhat on the *time* of sowing—thus, early sown grain has more time to tiller, and it actually will spread much more than late sown. In our remarks about the quantity of seed, we have had only in view the ordinary modes of sowing; no doubt is entertained that by the adoption of other modes, much seed might be saved. Sowing or planting in drills, by machines, has been much practiced in England, and to some extent in this country, and so far as we have known with success. *Dibbling*, or planting in hills, is also somewhat practiced in England under the *allotment* system. In this way a few quarts only of seed is enough for an acre, and the product is very great, making an average, in some districts, of forty-eight bushels per acre. But it must be recollected that under this system the ground is hoed and kept clean while the crop is growing—the cheapness of labor, and the dearness of land, justifying the course. But the American farmer would hardly find his account in bestowing so much labor in proportion to the quantity of ground and the quantity of produce.

We have said that spring wheat is liable to be injured by an insect. We think that which is sown early is most subject to injury from this cause. If the sowing is deferred till the latter part of May, it is thought the *season* of the worm becomes past before the wheat is sufficiently advanced to be injured by it. But as the late sown wheat is more liable to injury from rust, &c., than early sown, the farmer must make his calculations as he best can, which enemy is most formidable, or in what course lies his greatest chance of success.

Peas, for early use, cannot be sown too soon after the ground is dry enough to work. Select a warm piece of ground, rather sandy, and do not put on too much rank or strong manure, as it tends to throw the peas too much into vines.

The pea crop is a very profitable one in many situations. Sown on a sod furrow, it furnishes an excellent preparation for wheat, or any other crop. Very hot weather seems not to be favorable to the *filling* of peas; therefore it is advisable to sow them so early that they may get well advanced before the hottest and dryest part of the summer comes on.

Peas and oats are sometimes sown together, and are considered profitable. Ground into meal, they form an excellent food for fattening hogs and other animals, and in sections where Indian corn cannot well be grown, are highly esteemed.

CARE OF STOCK.

During the latter part of winter and the beginning of spring, stock requires more attention than at any other season. There is usually much stormy weather about this time, and under the fluctuations from heat to cold, and from fair to foul, the appetite of the animal is very irregular. Cattle, sheep and swine, are now bringing forth their young, and unless they are properly sheltered, provided with suitable food, and carefully watched and attended, they will certainly fall into bad condition. The best hay should have been reserved for feeding the cows and ewes at this period, and they should be fed, besides, with a little grain in some form, and some potatoes, turneps, carrots, or other vegetables. They should be fed lightly for a few days after parturition, because in the weakened state of the system at this critical time, there is danger of bringing on fever and inflammation by overloading the digestive organs. But after the system has become accommodated to the new change in the secretions, and the milk begins to flow freely, the food of the mother may be increased in proportion to the draft made on her by the increasing growth and demands of the young animal. This should be borne in mind. Thus, a cow with two calves to support, or a sheep with two lambs, should be supplied with double the quantity of food which is necessary to support but one; and if this is not done, the constitution of the mother will be very likely to be injured, or else the young will not have sufficient food. To enable a sow with ten pigs to keep herself in as good condition as if she had but five, she must receive food in proportion to the number; and as the young grow in size, her food must also be proportionally increased till they are able to obtain a part of their support from some other source.

Care should be taken that cows do not calve while tied to the stanchion, or confined in a narrow stall. Serious accidents may arise from inattention to this. If the birth takes place in the night the calf may get covered with the filth of the stall, and if the weather is severe, he may freeze before morning; or the cow may be thrown into a position by which she suffers a permanent injury. Separate apartments, warm and well littered, should be provided, in which the cow should be allowed to run loose for a few days preceding the birth of the calf, and for a day or two afterwards.

A word in regard to calves. If *veal* is the object, feed the cow well, let the calf suck, and make him fat as quick as possible. If milk is of most consequence, and the calf is not to be reared, it is best to "knock him in the head" as soon as the milk of the cow is fit for use. His carcass is worth something for the hogs, and his hide may pay for taking off for the tanner. In *rearing* calves, the expediency of any particular mode depends on circumstances. In the interior, where cattle are reared almost entirely for beef, and where labor is scarce, it is hardly worth the while to undertake bringing up calves "by hand"—it is less trouble to let them run with the cow for several months, and this is probably the best course in such locations. But where butter and cheese are valuable the case is different, and we should prefer teaching the calves to drink instead of allowing them to suck their dams. With close care and attention, good stock may be reared without giving them any new milk after they are two or three weeks old. Skimmed milk, *not sour*, with oil-cake gruel, or oat-meal, will make the calf grow very well. But the calf must be kept dry and warm, the food given warm, and the state of its health, till it becomes well accustomed to the diet, constantly watched. There are several advantages of rearing calves in this way. They become more tame, more readily learn to eat every thing, are more tractable, and are more easily brought to their *duties*, either as cows or oxen, and in some locations, as we have mentioned, this course is most economical.

Oxen and horses, which have worked hard during the winter, will be much benefitted by being allowed a respite during this month of storm and mud; and while the farmer and his boys are engaged in cutting and splitting the year's stock of wood, which has been (of course) got up by good sledding, he will find it much to his advantage to let his oxen quietly chew the cud "of sweet and bitter fancy" in the comfortable barn, or sunny barn yard.

This interval of rest will enable the animals to recover some of their flesh and strength, which have been exhausted in hauling wood and logs, or in carrying the farm products to market; their old hair becomes loose and falls off, the pores of the skin are opened, and the animals, reinvigorated, are fitted to withstand the heat and burden of the spring's labor.

CULTIVATION OF ASPARAGUS.

Of all vegetables, treated as "*greens*," the asparagus is considered by most, as standing at the head of the list. Comparatively few, however, provide themselves properly with a supply, or even where they have an abundance, it is not of the first quality. Perhaps a few hints on its culture, and on the mode of obtaining the finest, may be acceptable at this time.

The difference between large and small asparagus, depends very much on cultivation; a deep rich soil, and *plenty of room between the plants*, producing the largest growth. Something also doubtless is to be attributed to the variety; as by a successive selection of seed from the thriftiest plants, an ultimate improvement may be obtained. Hence, in making a bed, seed from those plants which are known to be very large, are to be preferred. If good plants, one or two years old, can be obtained at hand, the bed will of course be accelerated one year.

A common and a good practice in preparing an asparagus bed, is to trench the ground two spades deep, and then return the earth thus removed, mixed with alternate layers of nearly an equal quantity of stable manure, until the top of the bed is six inches above the surface of the ground. But a great improvement on one part of this process is—after each layer of soil is thrown on the preceding layer of manure, to *intermix it very thoroughly* with the manure, by means of a coarse iron rake, potatoe hook, or other suitable tool. This thorough admixture of soil and manure, though scarcely ever practiced, is of the greatest importance, as large lumps of pure manure, and of earth, without being finely divided and interfused, form but a poor material for the extension of the fine and delicate fibres of the growing plants.

The bed being ready for the reception of plants from the seed bed, which should be removed with the least possible injury to the roots, proceed to lay off the trenches for the rows. One of the greatest errors with most cultivators is crowding their plants too closely together; they wish, after so much labor in the preparation of a fine bed, to obtain the largest possible supply from it, but defeat their own purpose by the slender and diminished growth resulting from such treatment. The nearest possible distance which ought ever to be admitted in an asparagus bed, is one foot apart *in* the row, and eighteen inches *between* the rows. Thus, if the trenched bed is four feet wide, only two rows can be admitted, instead of four or five as usually practised. This may be seen by the following diagram, the dots indicating the plants, which are placed, not opposite, but alternating with each other, which gives the more space between them. If there are eighteen inches of space between the rows, then there will be fifteen inches from the rows to the edge of the bed, which is none too much for the proper extension of the roots. The trenches for the plants should be made six inches deep, and wide enough to admit the roots spread out horizontally, which must be done with the fingers. The depth should be such that two or three inches of earth may be spread on the crowns of the plants. The beds may be made of any length to suit cultivators. One a hundred and fifty feet long and four feet wide will supply an abundance for a moderate sized family.

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After a bed is transplanted, it should remain uncut for two seasons. Cutting sooner will greatly injure its subsequent thriftiness.

If it is remembered that the two chief requisites for success, are *plenty of room* for the growth of the plants, and a *deep, fertile soil*, no one need be at a loss in the cultivation of this fine vegetable. Good, constant, and cleanly culture, as every one must know, is indispensable. These requisites are of vastly greater consequence than large varieties merely. Indeed, the fact that with good cultivation and management, no plants are small, and without that none are large, has led many intelligent persons to suppose that the difference between giant and small varieties is owing entirely to these circumstances, and they are not far wrong.

One advantage which may be derived from planting the rows more distant than is usual, besides large growth, is the facility of keeping the ground cultivated, a light plow drawn by one horse being passed freely between them.

With such distances, and the facilities afforded for horse cultivation, much finer plants may be had from a rich deeply plowed soil only, than without them from a trenched bed two feet deep, though depth and distance combined are the best.

DOMESTIC ECONOMY.

Buckwheat Cakes, after standing to rise all night, are much improved by adding, just before baking, sour cream and saleratus—say a teacup full for two quarts of the batter. This treatment improves the flavor, and makes them richer and lighter. It was discovered this winter by a notable housekeeper in the western part of the state, where fine hot buckwheat cakes and keen appetites, on frosty mornings, often go together.

Corn Cake.—Two teacups of buttermilk, one of sour cream previously sweetened with saleratus, one tablespoonful of molasses, and Indian meal to make it nearly as stiff as muffins. Bake half an hour. Thoroughly tried by the above mentioned housekeeper, and found first rate; and also eaten with good *gusto* by the writer.

Apple Jelly.—Slice thirteen large apples very thin without paring them; then cover them with water; boil and strain them,—and to the juice add a pound and a half of loaf sugar, and as much lemon-juice as your taste may direct. Clarify it with eggs, and boil it to a jelly. It is an exceedingly delicate, palatable, and beautiful dish, fit to grace any wedding table, the writer having partaken of it on such an occasion, the housekeeper above named forming the center of attraction at the time. It is also very fine in sickness.

Domestic Yeast.—The following is copied from the London Gardener's Chronicle, and must be cheap and easy. Boil one pound of good flour, quarter of a pound of brown sugar, and a little salt, [how much is that?] in two gallons of water, for an hour. When milk warm, bottle it and cork it closely, and it will be fit for use in twenty-four hours. One pound of this yeast will make eighteen pounds of bread.

FRANKLIN COLLEGE.

From the Tennessee Agriculturist, we learn that this institution commenced operations on the first of January, with about fifty students, and that as many would probably apply in the course of a few months as can be accommodated. The President, T. Fanning, Esq., states that the prospects were favorable to success, which we are glad to hear. A greater number of mechanics are wanted, such as blacksmiths, coach makers, harness makers, and cabinet workmen; and it is stated that "a young man acquainted with any of these trades, and who is willing to devote some four or five hours a day to honorable industry, may be sure that he can at least pay for his board and tuition by his trade, and secure as good an education, in as short a time, as if he possessed millions."

Beaverwyck,[*] *the seat of Wm. P. Van Rensselaer*—(Fig. 28.)

LANDSCAPE GARDENING.

A Treatise on the Theory and Practice of Landscape Gardening, adapted to North America, with a view to the Improvement of Country Residences, comprising historical notices and General Principles of the Art, directions for Laying out Grounds and arranging Plantations, the Description and Cultivation of Hardy Trees, Decorative Accompaniments to the House and Grounds, the Formation of Pieces of Artificial Water, Flower Gardens, etc., with remarks on Rural Architecture. Second edition, enlarged, revised, and newly illustrated. By A. J. Downing, Author of Designs for Cottage Residences, etc. New-York—Wiley & Putnam.

The appearance of a second and greatly improved edition of this admirable work, must be hailed with pleasure by every friend of rural improvement. The early success which has attended the first and only work of American origin, devoted entirely to this subject, while it not only proves the ability of its execution, furnishes also the gratifying evidence of the rapidly increasing wish among our countrymen, for the tasteful embellishment of their country residences. To this increased attention to landscape gardening, the work before us has contributed very considerably, although but three or four years have elapsed since its first appearance.

Beside much valuable matter added to the present edition, a large portion of the first part of it has been rewritten, some modifications of the principles of the art introduced, and more than twenty new views are given, chiefly of American residences and their adjacent grounds, executed in the best style, and all excellent illustrations of the beautiful and picturesque in the art. Descriptions of many new places are introduced, and some valuable practical hints are appended to the body of the volume. As but few of our readers possess this work, we hope we shall do them an acceptable service, by giving a more extended account of its contents.

The work opens with a general notice of the objects of landscape gardening; a glance at the ancient and modern styles, with their characteristics; an account of the origin of the modern or natural style, its progress and general adoption; and a history of the art in the United States, with a reference to many examples now existing, accompanied by several beautifully engraved views. The general principles of landscape gardening are then laid down in a very clear and interesting manner, and an insight is given into the beauty, the endless variety of expression, and even the sublimity, belonging to the study of the modern style. The details of the art next come in order; and the treatment of woods and plantations, the grouping and arrangement of trees, and their peculiar characteristic expressions; with a subsequent full treatise on the individual ornamental trees adapted to the climate of the country, and the places to be assigned them in ornamental grounds, follow successively in course. Another section is devoted to the treatment of ground and the formation of walks; another to the formation of artificial lakes and the management of brooks, cascades and waterfalls; and another to rural architecture, with the features and associations of the different styles, illustrated by many views. The work concludes with a chapter on rural embellishments. An appendix contains many practical directions, and also a minute, and consequently useful and instructive description, by J. C. Loudon, of a moderate, but very beautiful suburban residence in the neighborhood of London, an excellent specimen of the modern style, and which every one, wishing to become well acquainted with it, would do well to study. From this general enumeration of the subjects of the work, our readers may form a faint idea of the vast fund of value and interest it must contain, every department being treated of in a manner eminently interesting to a person of any taste. Indeed, we found it very difficult to tear ourselves away from its fascinations, during the first examination.

The works of Loudon, which have been extensively read in America with a corresponding influence on this art, though pre-eminent for their plain, practical, condensed style, and for the good sense, general correct taste, and adaptedness of principles, indicate nevertheless a far less appreciation of the picturesque than is contained in the work before us. The favor with which Loudon regarded the old or geometric style of gardening and planting, we consider as nearly his only failure in this respect, except which, his writings possess a *practical* value rarely if ever equalled. But on the other hand, the work of Mr. Downing has been eminently successful in laying down the principles of EXPRESSION, whether of single trees and objects, or as grouped without discord in a varied and extensive landscape. He very properly exposes the absurdity of the geometric style, where "the greatest care was taken to avoid any appearance of irregularity. A tree upon one side of the house, was opposed by another *vis a vis*, and a row of trees at the right of the mansion had its always accompanying row on the left; or as Pope in his satire has more rythmically expressed it—

> "Grove nods to grove, each alley has its brother,
> And half the platform just reflects the other."

The old gardener to the Earl of Selkirk was very strongly imbued with the old style mania, when, having shut up a thief for stealing fruit, in one summer house, was compelled, for the sake of symmetry, to confine his own son in the summer house opposite. The extent to which this mania was carried, in distorting nature into odd conceits, with little or no exercise of taste for her

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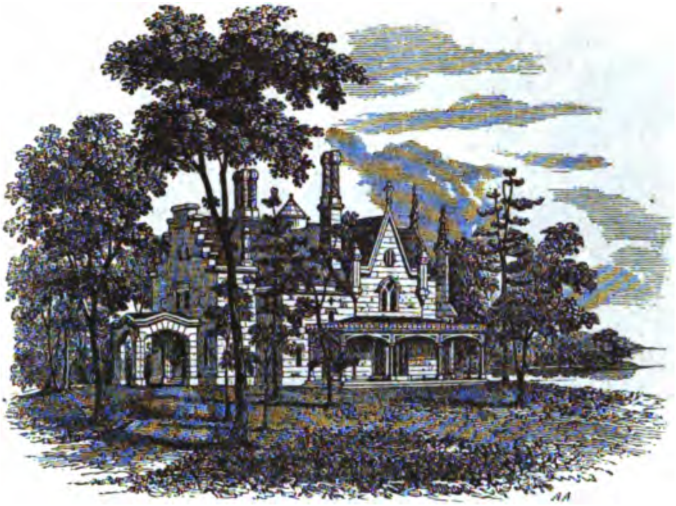
[*] *Beaverwyck*, a little north of Albany, on the opposite bank of the river, is the seat of Wm. P. Van Rensselaer, Esq. The whole estate is ten or twelve miles square, including the village of Bath on the river shore, and a large farming district. The home residence embraces several hundred acres, with a large level lawn bordered by highly varied surface of hill and dale. The mansion, one of the first class, is newly erected from the plans of Mr. Diaper, and in its interior—its hall with mosaic floor of polished woods, its marble staircase, frescoed apartments, and spacious adjoining conservatory—is perhaps the most splendid in the Union. The grounds are yet newly laid out, but with much judgment; and *six or seven miles* of winding, gravelled roads and walks have been formed—their boundaries now leading over level meadows, and now winding through woody dells. The drives thus afforded, are almost unrivalled in extent and variety, and give the stranger or guest, an opportunity of seeing the near, and distant views to the best advantage.—p. 37.



Kenwood,[*] *the residence of Joel Rathbone.*—(Fig. 29.)

genuine beauties, is strikingly exhibited in an extract from a satire of Pope, who, in common with all true poets, shrunk with aversion from the sight of trees drilled rank and file into straight lines, and sheared down to pyramids and statues of verdure:

> "INVENTORY OF A VIRTUOSO GARDENER. Adam and Eve in yew; Adam, a little shattered by the tree of knowledge in the great storm; Eve and the serpent, very flourishing. Noah's ark in Holly; the ribs a little damaged for want of water.
> The tower of Babel, not yet finished.
> St. George, in box; his arm scarce long enough, but will be in a condition to stick the dragon by next April.
> Edward the Black Prince in Cypress.
> A pair of giants stunted, to be sold cheap.
> An old maid of honor, in wormwood.
> A quick-set hog, shot up into a porcupine, by being forgot a week in rainy weather."

All these contrivances, and fifty others similar, and dissimilar, including concealed pipes for suddenly dousing visitors with cold water, and including also many of the statues, busts, and other objects too common at the present time, were very correctly characterized by Lord Bacon where he said, "as for the making of knots or figures of divers colored earths, that they may lie under the windows of the house, they be but toys; you may see as good sights many times in tarts. I, for my part, do not like images cut out in juniper and other garden stuff; they are for children." How much more worthy of the attention of an enlightened mind, is the simple imitation of the beautiful and picturesque, by a handsome and natural arrangement of majestic trees, adapted to the character of the grounds.

In urging the application of the principles of correct taste, even for very small places, the author has the following excellent remarks:

"But if Landscape Gardening, in its proper sense, cannot be applied to the embellishment of the smallest cottage residences in the country, its principles may be studied with advantage, even by him who has only three trees to plant for ornament; and we hope no one will think his grounds too small to feel willing to add something to the general amount of beauty in the country. If the possessor of the cottage acre, would embellish in accordance with propriety, he must not, as we have sometimes seen, render the whole ridiculous by aiming at ambitious and costly embellishments; but he will rather seek to delight us by the good taste evinced in the *tasteful simplicity* of the whole arrangement. And if the proprietors of our country villas, in their improvements, are more likely to run into any one error than another, we fear it will be that of too great a desire for display—too many vases, temples and seats—and too little purity and simplicity of general effect."

Again, in speaking of the *cottage ornée*, and of laying out and embellishing limited grounds, he says:

"In making these arrangements, even in the small area of a fourth of an acre, we should study the same principles, and endeavor to produce the same harmony of effects, as if we were improving a mansion residence of the first class. The extent of the operations, and the sums lavished, are not by any means necessarily connected with successful and pleasing results. The man of correct taste, will, by the aid of very limited means, and upon a small surface, be able to afford the mind more true pleasure, than the improver who lavishes thousands without it, creating no other emotion than surprise or pity at the useless expenditure incurred." It is in accordance with these principles that the author very properly places this motto upon his title-page:

"Insult not nature with absurd expense,
Nor spoil her simple charms by vain pretence;
Weigh well the subject, be with caution bold,
Profuse of genius, not profuse of gold."

The wide extent of many of the English parks—though affording some of the finest specimens of the modern style of landscape gardening,—where sometimes a broad and magnificent landscape is embraced within the limits of a single park—we hope never to see imitated in this country, especially if at the same cost of human happiness. For we cannot regard these, even in all their glory, with their wide-spread undulating lawns, their majestic trees, marked with the age of centuries, and embellished with all the beauty of nature, and all the poetry of association—without secret pain and aversion, from the recollection of the thousands of poor laborers, tasked to their utmost strength to support their starving and suffering families, while a large share of their toils go to the support of these costly establishments. While, on the other hand, it is a source of much gratification that such drawbacks do not exist in our own region of the country, we hope the spirit of republican simplicity will always so prevail, that while it teaches us to cultivate a taste for natural and rural beauty, we may always shun extravagant profusion and ostentatious display; and use without abusing the creations of the source, "who made all nature beauty to the eye, and music to the ear." It is with great justice that the author remarks,

"The owner of a small cottage residence, may have almost every kind of beauty and enjoyment in his grounds, that the largest estate will afford, so far as regards the interest of trees and plants, tasteful arrangement, recreation and occupation. Indeed, we have little doubt that he, who directs personally, the curve of every walk, selects and plants every shrub and tree, and

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[*] Situate about two miles south of Albany, on a densely wooded hill, and is one of the most complete specimens of the Tudor style in the United States. It was built from the designs of Davis, and is, to the amateur, a very instructive example of this mode of domestic architecture.—p. 370.

Villa of Theodore Lyman, near Boston—(Fig. 30.)

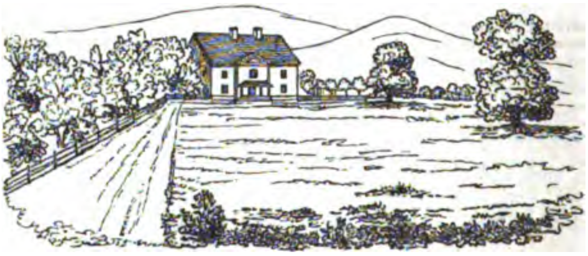
watches with solicitude every evidence of beauty and progress, succeeds in extracting from his tasteful grounds of half a dozen acres, a more intense degree of pleasure, than one who is only able to direct and enjoy, in a general sense, the arrangement of a vast estate."

The following extract contains much in little, and conveys valuable hints to the person of taste:

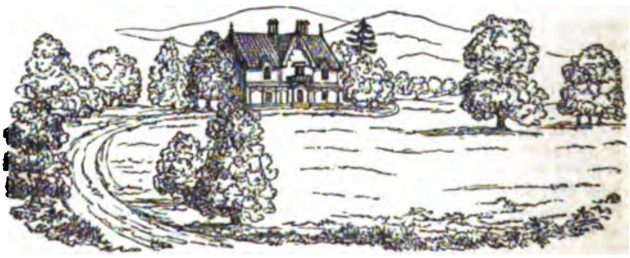
"In the case of large landed estates, its capabilities may be displayed to their full extent, as from fifty to five hundred acres may be devoted to a park or pleasure grounds. Most of its beauty, and all its charms, may, however, be enjoyed in ten or twenty acres, fortunately situated, and well treated; and Landscape Gardening in America, combined and working in harmony as it is with our fine scenery, is already beginning to give us results scarcely less beautiful than those produced by its finest effects abroad. The lovely villa residences of our noble river and lake margins, when well treated—even in a few acres of tasteful fore-ground,—seem so entirely to appropriate the whole adjacent landscape, and to mingle so sweetly in their outlines with the woods and valleys and shores around them, that the effects are often truly enchanting."

But these instances are the splendid few—with regard to more frequent cases, our author remarks:

"In many parts of the Union, where new residences are being formed, or where old ones are to be improved, the grounds will often be found, partially, or to a considerable extent, clothed with belts or masses of wood, either previously planted, or preserved from the woodman's axe. How easily we may turn these to advantage in the natural style of landscape gardening; and by judicious trimming when too thick, or additions when too much scattered, elicit often the happiest effects in a magical manner! In the accompanying sketch, (fig. 25,) the reader will recognize a portrait of a hundred familiar examples, existing with us, of the places of persons of considerable means and intelligence, where the house is not less meagre than the stiff approach leading to it, bordered with a formal belt of trees. The succeeding sketch, (fig. 26,) exhibits this place as improved agreeably to the principles of Landscape Gardening, not only in the plantations, but in the house—which appears tastefully altered from a plain, unmeaning parallelogram, to a simple, old English cottage—and in the more graceful approach. Effects like these, are within the reach of very moderate means, and are peculiarly worth attention in this country, where so much has been partially, and often badly executed."



View of a Country Residence as frequently seen—(Fig. 25.)

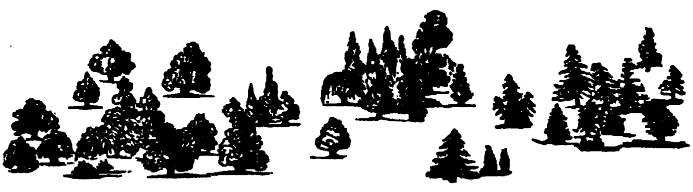


View of the same Residence improved—(Fig. 26.)

The following clear, judicious, and interesting remarks on the arrangement and grouping of trees, cannot fail to be useful to every person planting his own grounds:

"The only rules which we can suggest to govern the planter are these: First, if a certain leading expression is desired in a group of trees, together with as great a variety as possible, such species must be chosen as harmonize with each other in certain leading points. And, secondly, in occasionally intermingling trees of opposite characters, discordance may be prevented, and harmonious expression promoted, by interposing other trees of an intermediate character.

"In the first case, suppose it is desired to form a group of trees, in which gracefulness must be the leading expression. The willow alone would have the effect; but in groups, willows alone produce sameness: in order, therefore, to give variety, we must choose other trees which, while they differ from the willow in some particulars, agree in others. The elm has much larger and darker foliage, while it has also a drooping spray; the weeping birch differs in its leaves, but agrees in the pensile flow of its branches; the common birch has few pendant boughs, but resembles in the airy lightness of its leaves; and the three-thorned acacia, though its branches are horizontal, as delicate foliage of nearly the same hue and floating lightness as the willow. Here we have a group of five trees, which is, in the whole, full of gracefulness and variety, while there is nothing in the composition inharmonious to the practiced eye.



Example in grouping—Fig. 27.

"To illustrate the second case, let us suppose a long sweeping outline of maples, birches, and other light, mellow-colored trees, which the improver wishes to vary, and break into groups, by spiry topped, evergreen trees. It is evident, that if these trees were planted in such a manner as to peer abruptly out of the light colored foliage of the former trees, in dark, or almost black masses of tapering verdure, the effect would be by no means so satisfactory and pleasing, as if there were a partial transition from the mellow, pale green of the maples, etc., to the darker hues of the oak, ash, or beech, and finally the sombre tint of the evergreens. Thus much for the coloring; and if, in addition to this, oblong headed trees, or pyramidal trees, were also placed near and partly intermingled with the spiry-topped ones, the unity of the whole composition would be still more complete.[*]

"Contrasts, again, are often admissible in woody scenery, and we would not wish to lose many of our most superb trees, because they could not be introduced in particular portions of landscape. Contrasts in trees may be so violent as to be displeasing; as in the example of the groups of the three trees, the willow, poplar and oak: or they may be such as to produce spirited and pleasing effects. This must be effected by planting the different divisions of trees, first, in small leading groups, and then by effecting a union between the groups of different character, by intermingling those of the nearest similarity into and near the groups: in this way, by easy transitions from the drooping to the round-headed, and from these to the tapering trees, the whole of the foliage and forms, harmonize well."

It has often been remarked that while the natural style of landscape gardening is well adapted to old countries, thickly settled districts, and the vicinity of cities, the geometric style is better suited to new countries already abounding with natural scenery. The author of the work before us very properly exposes the error of this opinion. If the geometric style is a distortion of nature, then it must offend a correct taste wherever it is to be found, whether in the city square, or in the wilds of the west. All that is necessary, in employing the natural method in wild regions, is to adopt a more graceful finish on every part of the grounds, by closely shorn lawns, highly finished gravel-walks, and by planting the more rare exotic trees instead of those of native growth—to have the place "kept in high and polished order, instead of the tangled wildness of general nature." Art and wealth are more strikingly and visibly shown to the hasty observer by the geometric style; but the *perfection* of art consists not in this external show; but merely in the pleasing and admirable effect, while the art that produced it is concealed from the eye of the spectator. The most beautiful painting is that which most nearly resembles the finest objects of nature, and where the stroke of the pencil is concealed; and not openly visible, as in the daubings of the sign painter.

A not unfrequent error, with those who are little acquainted with the art, is to suppose that the modern style consists *merely* in *irregularity*. But, irregularity without arrangement, is not taste—confusion is not the beautiful in nature. The scenery which the art produces may *appear* the accidental arrangement of appropriate parts; but it is as really the result of study, as the roughly dashed execution of a skillful painter, where every touch, rude and accidental as it may seem at first glance, is found, on a view of the whole together, to combine in producing the most pleasing assemblage of the different portions. The rules laid down by the author, for the successful arrangement of the various parts of an artificial landscape, are given with great clearness and vigor, and are well worthy of attentive study. Few, at first view, would be likely to form even a remote conception of the various points to take into consideration in laying out a single acre of ground, so as to produce the best effect, combined with "*unity, harmony* and *variety*." These are even necessary, where the *planting of nature* already exists, to "the nice perception," in the words of the author, "of the natural expression, as well as the capabilities of a residence," and in which "lies the secret of the superior results produced by the improver, who, to use the words of Horace Walpole, "is proud of no other art than that of softening nature's harshness, and copying her graceful touch."

Our limits preclude much further extension of this notice. But we cannot pass by the interesting section on Rural Architecture without a few words of passing commendation. It may not be known to all our readers, and we will therefore state here, what is well known by many to be the fact, that the publication of this section of this book of Mr. Downing's, has done and is doing more to impart correct notions of the different styles of domestic architecture among our country gentlemen than all other works or articles on the subject, that have ever been read on this side of the Atlantic. Before its appearance, (and that of Mr. Downing's succeeding volume on "Cottage Residences,") there was generally prevalent only a vague and distorted notion of the Grecian and Gothic styles—the former was exhibited in the horrible form of a heavy wooden portico, stuck, without propriety or meaning, against a simple clapboarded house. The author of the work before us, boldly attacked the falsely called Grecian, and pointed out its entire unfitness for domestic purposes, while he has showed the superior beauty of more simple modes of building. Any one who is conversant with the great change of taste which has taken place in the last few years, and is every day more fully evinced, will not be at a loss, on referring to Mr. Downing's remarks on this subject, to trace the revolution of feeling in these matters to its proper cause.

To give our readers some faint idea of the illustrations of the work, and of this section in particular, we introduce here the view of the princely mansion of WM. P. VAN RENSSELAER, opposite Albany, an extensive and pleasing example in the Grecian style, (Fig. 28.) Next an example in the Italian style—the seat of the Hon. THEODORE LYMAN, near Boston, (Fig. 30.) (This is necessarily so reduced as to lose much of the beautiful effect of the irregular front.) For an example of the Gothic, we borrow a view of the fine villa of JOEL RATHBONE, near Albany, (Fig. 29.) And in a simpler and more cottage like Gothic—what may be called the English cottage style, (Fig. 31)—the view of the pretty Gardener's Lodge at Blithewood, Dutchess county, the seat of ROBERT DONALDSON.

It will be understood that in the extracts we have given, we do not by any means intend to furnish directions which can be followed in laying out grounds. They are entirely too meagre for this purpose, and are only a glimpse of the work, which after all is but a faint glimpse

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[*] We are persuaded that very few persons are aware of the beauty, varied and endless, that may be produced by arranging trees with regard to their coloring. It requires the eye and genius of a Claude, or a Poussin, to develope all these hidden beauties of harmonious combination. Gilpin rightly says, in speaking of the dark Scotch fir, "with regard to color in general, I think I speak the language of painting, when I assert that the picturesque eye makes little distinction in this matter. It has no attachment to one color in preference to another, but considers the beauty of all coloring as resulting, not from the colors themselves, but almost entirely from their harmony with other colors in their neighborhood. So that as the Scotch fir tree is combined or stationed, it forms a beautiful umbrage or a murky spot."

The Gardener's House, Blithewood—(Fig. 31.]

of the vast fund of information and interest contained in the 500 pages, embellished with more than a hundred appropriate and beautiful illustrations.

If it were possible in any respect to improve the work, it would perhaps be in a more terse and vigorous style, and occasionally in a less studied and polished mode of expression. And to readers like us, educated between the plow-handles, it would be pleasant to have the various extracts in French, Spanish, Latin and Italian, rendered into English, the only language which, having once learned, we have not become somewhat rusty in. But these detract nothing from the merits of the work as an excellent treatise on Landscape Gardening, which, unlike many works on similar subjects, is strictly American in its character and adaptation; and for general utility it stands without a rival, and probably will continue to do so for many years to come.[*]

STATISTICS OF GOOD AND BAD FARMING.

We know of no better way of showing accurately, the importance of the diffusion of agricultural knowledge, than by a comparison of the aggregate products of the land as they actually exist, with what they might probably be with improved cultivation. The following numbers exhibit the whole amount of each crop in the United States, according to the agricultural census a few years since, which was by many supposed to be too low, from various omissions at the time it was taken, and certainly less than at present, from the increase of improved land and population:

Wheat,	91	million bu.	Buckwheat,	7	million bu.
Oats,..	130	"	Corn,.....	387	"
Barley,	5	"	Potatoes,..	113	"
Rye,...	19	"	Hay,......	12	" tons.

The average product per acre would have been very interesting, could it have been derived accurately from facts; it is supposed to be not far from the following, taking the whole country and all seasons together:

Wheat, ...	12	bushels.	Buckwheat,...	15	bushels.
Oats,......	25	"	Corn,........	20	"
Barley,....	20	"	Potatoes,.....	100	"
Rye,......	20	"	Hay,........	1	ton.

With our best farmers, or with many which might be named, the whole of these crops taken together, would average about double these rates; some would more than be tripled, as for example, corn, instances being frequent where the general crop for the farm together, and for successive seasons, has exceeded eighty, and in some rare instances, one hundred bushels. These increased results have been obtained by an improved course throughout, including systematic rotation, the best management of manures, the use of good implements, thorough underdraining, the selection of good animals, of the best varieties of grain, and general good management throughout. The spread of agricultural knowledge through periodicals, and in other ways, has mainly contributed to this excellent result.

The total number of bushels of the above mentioned crops, raised in the United States, according to the census, is 764 millions. If these would average each one third of a dollar in value, the total product of these crops would be 253 million dollars. There is no doubt, therefore, that if the best farming prevailed that this enormous amount would be doubled; and therefore that no less than 250 millions of dollars are lost to the country, from the want of a more thorough diffusion of agricultural knowledge and a corresponding practice. It will be observed that the preceding sum scarcely includes one-half of the whole proceeds of farm labor, as cotton, sugar, tobacco, and the products of domestic animals, are not included, all of which would be increased in a corresponding ratio.

It has been estimated, that all the money paid out by our State government in the shape of agricultural bounties, has been much more than returned to the State treasury in canal tolls on the resulting increased productions. It would be an interesting fact, could it be known, how much the treasury has been enriched by the spread of agricultural publications through the State within the last ten years—reckoning by hundreds of thousands would doubtless be exceedingly moderate.

CHEESE MANUFACTURE IN HERKIMER CO.

The Address of Col. A. Petrie, before the Herkimer County Ag. Society, is a sound, common sense article, evincing the good judgment and practical observation of its author. We give an extract in relation to the manufacture of cheese, which from the facts it contains, is especially worthy of preservation:

"Some farmers make less than 300 pounds of cheese per cow in a season, while others exceed 600. Perhaps some of this difference may be accounted for by the inequality of advantages; but I am assured by gentlemen in whose skill in the art we have the highest confidence, that there is a great difference in the product per cow, when all advantages are equal. One case I will mention: A gentleman who has for years made more than 600 pounds per cow in a season, from a dairy of 25 cows, let out his dairy to a tenant, whose reputation as a common cheese-maker, was of the highest order. He observed, that the tenant's cheeses were smaller and lighter than they should be, and suspecting the cause, watched his mode of making them, and found it to be like that of nearly all the cheese makers in the country, by guess. The milk was tempered, and set, and the curd scalded without a thermometor, and less care was taken in other parts of the process than he was accustomed to. He attempted to teach the tenant, who was rather prejudieed against "book farming"—reminded him of his reputation. The landlord, however, made a few cheeses himself, and the tenant looked on. These were found to be larger and heavier than the cheeses made by the tenant. The tenant then adopted the improved mode, and he could make as large a cheese as his friend. Both gentlemen now agree, that the improved mode increased the amount about 10 per cent. Now the tenant was evidently more than an ordinary cheese maker, for he would have made over five hundred pounds per cow during the season, but by the improved mode he made over six hundred."

Col. P. remarks that the average rate of cheese per cow in Herkimer county is supposed to be less than 350 pounds per cow, and that as it is nearly all made by *guess*, it is fair to suppose that a careful, scientific mode of making would increase the amount at least 10 per cent; which would amount to over *sixty-seven thousand dollars* annually for that county.

Fine Pork.—Mr. Daniel Briggs, of Hyde Park, Dutchess county, fattened six shoats, which at eight months old were killed and weighed 275 pounds each.

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[*] We would respectfully suggest in the next edition, which must be issued at no remote period, the introduction of the *Black Maple* as a very rich and handsome shade tree, and also of the *Golden Ash*, as one of peculiar character and beauty. Also, the quantity of water needed in a stream, to supply evaporation in summer from artificial lakes of given extent. The note from the N. Y. Med. Repos. appears to contain some mistake, where the "Montezuma estate, Jefferson, Cayuga County, N. Y." is spoken of. There is no such place as *Jefferson* in the county. The large button-wood alluded to, grew at Montezuma in the township of Mentz in that County. We do not mention these things to exhibit errors, for we know of scarcely any work of equal size, and embracing so much variety of matter, so free from mistakes.

NEW-YORK STATE AG. SOCIETY.

The regular monthly meeting of the Executive Committee of the N. Y. State Ag. Society for February, was held at the Society's Room in the old State Hall on the 13th. The President, B. P. Johnson, Esq. of Oneida in the chair. Present—Messrs. Prentice, Hillhouse, M'Intyre and Tucker of Albany—Mr. Beekman of Columbia—Messrs. Walsh and Vail of Rensselaer—Mr. Enos of Madison, and Mr. Lee of Erie.

Reports of Committees.

Mr. Johnson, from the committee to whom was referred the applications for the prize for the best managed Cheese Dairy, reported that they had awarded the Gold Medal to Alonzo L. Fish of Cedarville, Herkimer Co., and three vols. Transactions to Abraham Hall of Holland Patent, Oneida county.

Mr. Johnson also reported that the committee had awarded the prize of $25, for the best Experiment in the Culture of Indian Corn, to George Geddes of Camillus, Onondaga county.

Mr. Johnson also reported that the committee on that subject, had awarded the prize of $20, for the best Essay on Farm Management, to John J. Thomas of Macedon, Wayne county.

Mr. Beekman, from the committee to whom was referred the Essays on the importance of scientific knowledge in prosecuting successfully the ordinary pursuits of agriculture, reported that the committee had examined the three Essays submitted to them, neither of which, in their opinion were written with sufficient care to entitle it to the premium; and they recommend that the same prize be offered another year.

Mr. Lee, from the commiitee to whom the applications for the prize for the best Text Book on Agriculture for the use of Schools was referred, reported that two books were submitted to them, neither of which were sufficiently adapted for the purpose to entitle it to the prize, and concluded by recommending that the same premium be again offered.

Mr. M'Intyre, from the committee on Essays on Rotation of Crops, reported that they had awarded the prize, $20, to the writer of the Essay marked A., the author's name being unknown to them. [It was written by John J. Thomas, Macedon.]

Mr. R. L. Pell, from the committee on Essays on the Culture of the Apple, sent in a written report, awarding the prize, ($20.) to the Essay sent in with the report. [This Essay was written by John J. Thomas.]

Mr. Prentice, from the committee on Essays on the prevalent disease in potatoes, reported that they had come to the conclusion that neither of the Essays were such as would warrant them in awarding the premium.

Mr. Lee, from the committee on Essays on Manures, reported against awarding the premium to the Essay submitted to them. He also reported that the committee had awarded a Silver Medal to R. L. Pell of Pelham, Ulster County, for his report of Experiments to show the comparative value of different kinds of food for cattle.

Mr. Walsh, from the committee on Essays on the Culture of Silk, stated that but one Essay had been submitted to them, and that evidently not intended for the premium, as it did not contain the matters required in the prize Essay. The Essay was referred to the committee of publication.

The committee on Wheat, at the annual Meeting recommended that a premium of $15 be awarded to Mr. E. J. Ayres of Tompkins, provided he furnished certain farther particulars, which, Mr. Ayres having furnished, a premium of $15 was voted him, on his wheat crop, amounting to 114 bushels and 58 lbs. on two acres.

Mr. Beekman presented the Annual Report of the American Institute, which was referred to the committee of publication.

Messrs. Walsh, Lenox and Prentice, were appointed a committee on the Library.

The discussion and arrangement of the List of Premiums occupied most of the afternoon, and not being completed, the Board adjourned to meet again on the 15th.

Feb. 15th.—The President in the chair. Present—Messrs. Vail, Hillhouse, M'Intyre, Lee, Enos, and Tucker.

The premium List was taken up, and after a few trifling additions, was ordered to be published.

The Board then proceeded to the appointment of County Corresponding Committees in each County. (We are obliged to defer the publication of this list of committees till our next.)

A resolution was adopted, directing the Corresponding Secretary to open a correspondence with the County Committees, Superintendents of Common Schools, and others, for the purpose of furthering the objects of the Society, and especially the introduction of the study of the principles of Agriculture into our Schools and Academies.

Messrs. Tucker, Beekman and Lee, were appointed a committee of publication.

After the transaction of a variety of other business, the Executive Committee adjourned to meet again on the Second Thursday of March.

A room has been fitted up, in the old State Hall, exclusively for the use of the State Society, where the meetings will hereafter be held. Entrance on Lodge, corner of State-street.

Payment of Premiums.

All money premiums awarded by the Society, may be obtained on application to Thomas Hillhouse, Treasurer, or to Luther Tucker, Rec. Secretary, Albany. ☞ All premiums not demanded within *four months* after the award, will be considered as donations to the Society.

ANSWERS TO INQUIRIES.

H. Ambler, Bethel, Conn., will find some good suggestions on improving worn-out lands, perhaps applicacable to his location, in our Feb. No. page 69.

A. W.—Subsoil Plows can be had of Pruyn, Wilson & Vosburgh of this city—price, from $8. to $16.

M. B.—Black Sea Wheat not to be had in this city to our knowledge.

Lucerne.—D. E., Allegan, Michigan. The price of lucerne is 37 cents by the single pound. If sown broadcast, fifteen pounds are required for an acre. It can be sent to Detroit per express.

Salt for Butter.—We cannot particularly answer the inquiry of Mr. Barton, in regard to the means of ascertaining good from poor salt. The best salt for butter, we believe to be that which is usually sold under the name of *rock* salt. It is sometimes ground for dairy purposes. It may also be rendered fine by putting it in a kettle or boiler, with water enough to cover it, and heating it till the lumps are broken down, stirring it while the process of heating is going on. When it has become fine it may be dipped out and drained, and it is in a suitable state to use. Any impurities that rise to the top of the water while the salt is melting, should be skimmed off. The Liverpool blown, or bag salt, often contains impurities, and does not answer well for butter. The table salt, so called, made at Salina, in this state, it is said by those who have used it, answers very well. Mr. B. will find at page 318, of our last volume, ample directions for purifying salt for butter.

Clover Seed.—"A Subscriber," at Martindale, N. C., is informed that we know of no way of cleaning clover seed, or separating it from the head or chaff, but by a hulling machine. It may be, and often is, sown in the *chaff*; but no rule can be given as to the quantity per acre, as every thing depends on the quantity of seed there is in proportion to the whole bulk.

Soiling.—Our Maryland correspondent, W. Orcum, (if we read the name right,) will find the exact information he asks for on this subject, at p. 22, of our number for Jan. last, where he will see that Mr. Newhall keeps 25 milch cows on the soiling system. He is also referred to pages 108, 182 and 250, of our last volume, and to page 48, vol. 10, where he will find a detail of the practice of Jas. Gowen, Esq.

Fruit-trees.—Mr. Orcum asks the best time for transplanting trees. The fall, immediately after the leaves have fallen, is preferred by many, and on dry ground, perhaps it is better than spring planting. If, however, you want trees, and did not get them last fall, attend to it in the spring. The roots of trees should not be allowed to get bound by a tough grass sward. If the orchard is not plowed, the trees may be dug round and manured, with compost, muck, &c. On the Ohio river, where large quantities of apples are raised for the New-Orleans market, it is found best to gather them before they get too ripe, and they are picked while the leaves are fully green.

PRUNING HARDY GRAPES.

There are many of our readers, who cultivate fine varieties of hardy grapes, such as the Catawba, Bland, Isabella, Black Cluster and others, who obtain very inferior fruit from a want of proper pruning and culture. Let this work not be passed over another season. They may be pruned any time during winter, till within a short time before the commencement of the flowing of the sap. If put off too long, the bleeding, or effusion of sap from the wounds, will seriously injure them. A week or two is in general sufficient for the freshly cut faces to become dry enough to close the sap pores. Sometimes during a long cold season of freezing weather in spring, moderate pruning may be given with safety, which in milder weather would be highly improper.

It is hardly necessary to give any special directions for pruning hardy grape vines. Those who know how to turn out the thick, crooked, and superabundant branches of fruit trees, to produce thrifty growth of the remainder, and let in the air and sun, can hardly fail in applying the same rules to hardy grapes.

NEW PUBLICATIONS.

Catechism of Agricultural Chemistry and Geology—by **James F. W. Johnston**, of Edinburgh, author of "Lectures on Agricultural Chemistry and Geology," &c. with an Introduction by **John Pitkin Norton**, of Farmington, Connecticut. From the eighth English edition, with notes and additions by the author, prepared expressly for this edition.

In this little work, we think Professor Johnston has decided in the affirmative, the question whether the study of chemistry and geology, as applicable to agriculture, can be properly introduced into elementary schools. The subjects are arranged in a connection so natural, and treated in a style so plain and simple, that any child who is capable of reading and understanding the English language, may readily acquire a knowledge of the contents of the book. We believe the introduction of this work into the schools of this country, is destined to effect an incalculable good. From its pages we believe the youth will receive an insight into the *arcana* of nature, which cannot fail to stimulate him to investigations from which the happiest results will flow. Habits of thought and reflection will be induced, by which the business of agriculture will be more thoroughly understood, and not only practiced with greater pecuniary advantage, but the mind of the farmer will become expanded, and his labors at once lightened and rendered pleasant, by the aid of philosophy.

In saying that this book is adapted to children and youth, we would not be understood as intimating that people of mature age would not be largely benefitted by it. On the contrary, we think it should be in the hands of every farmer. Many would find here an explanation of important scientific terms with which they may not be familiar, while *all* will find it a very convenient manual of reference.

We shall recur to this subject next month, and furnish more extended notice of the work. Published by Erastus H. Pease, Albany. Price 18¾ cents.

American Quarterly Journal of Agriculture and Science—conducted by Dr. E. Emmons and Dr. A. J. Prime. The first number of this work has been issued. It is a neatly printed octavo of 184 pages, consisting mostly of original articles. We have not read the whole of the contents with the attention which we intend to devote to them, but are nevertheless able to say that several of the articles are of a highly valuable character, and ably written. Candor, however, obliges us to state that on some points which are introduced into the work, we are compelled to differ in opinion from the respected editors. We allude particularly to the discouragement of "root culture," and the expression of "regret," by the editors, that this branch of husbandry has been so much encouraged by our "agricultural writers." We mention this in no captious spirit, or desire to find fault, but simply because we deem the subject an important one to the interest of the farmer. We have not now room to discuss the matter, but may recur to it again.

The Review, we are glad to hear, is well patronized, another evidence that a spirit of agricultural inquiry is deeply awakened; and we trust that this journal will be an important aid in dispensing the light which is so earnestly sought after. Published in this city, by the editors, at $3 a year.

SCHOOL DISTRICT LIBRARIES.

We respectfully invite the attention of county and town superintendents, to the subject of the introduction of an agricultural book into our school libraries. The Cultivator for the year 1844, contains much matter which we trust will prove of great value to most of the readers of the school libraries of the state, a class of persons probably more than three-quarters of whom are engaged in agricultural pursuits. We are most decidedly of the opinion that a larger share of reading, directly relating to the occupation which employs nearly all the time of so large a portion of our citizens, would be in the highest degree appropriate and beneficial.

Among the contributors to the vol. we speak of, there are more than *three hundred correspondents*, almost all of them practical farmers, and a large share residing in our own state, many of them distinguished for their great success in the cultivation of the soil. The matter thus furnished, not only possesses great practical value, but embodies the latest established improvements, and is peculiarly fitted to our own region of country. In addition to this, the *amount* of matter furnished for the price, becomes another strong inducement for the general introduction of this volume into school libraries. There is six times as much reading as in one volume of Harper's School Library, of average size, and illustrated by more than one hundred handsomely executed wood engravings. The volume is furnished, well bound, for $1.25, and we respectfully solicit the attention of all concerned or in any wise interested in these libraries, to this cheap and effectual means of imparting agricultural knowledge.

EXPERIMENTS IN PLANTING.

The advantages of free admission of light, and free circulation of air, to the growth of plants, are in a good degree obvious to persons of any experience in agriculture. So important are these influences to Indian corn, that an advantage is known to result from giving the widest space to rows running north and south. This more readily admits the light and heat of the sun, than rows running in a contrary direction. It has been suggested that planting corn and potatoes in alternate rows, or in alternations of two rows each, would give a greater aggregate product for a given extent of land, than if each crop were planted entirely by itself. Experiments relative to this point have been made in Massachusetts for a few years past, under the direction of the Plymouth County Ag. Society, and the results so far, indicate considerable advantage in favor of the mode of alternate planting. Mr. Nathan Whitman, who received, for an experiment of this kind, made last season, a premium of $15, planted half an acre with corn alone; from this was harvested 42 43-75 bushels; half an acre with potatoes; from this was harvested 136 7-56 bushels; and half an acre in alternate rows of corn and potatoes; from this was harvested 22 50-75 bushels of corn, and 79 40-56 bushels of potatoes. In this experiment there appears to have been a gain in mixed planting of ten bushels of corn to the acre, and twenty-six bushels of potatoes. Some experiments reported to this society in former years, we believe showed about the same results.

Effects of Ashes.—Mr. Peter Crispell, of Hurley, Ulster county, informs us that he raised last year, on one acre of land, three tons twelve hundred and eighty pounds of hay, at one crop. The hay was in merchantable condition and of good quality, as will appear from the fact that it was sold at eight dollars per ton, and was all weighed on the scales. The soil where this crop grew, was a dry, loamy alluvion, and had been in grass many years. Last spring Mr. C. spread on a hundred bushels of leached ashes to the acre, which cost eight cents per bushel. The ashes increased the quantity of hay nearly one-half, and from former experiments in the use of them, it is known that their effects continue for several years.

Mr. Crispell has made some trials with both leached and unleached ashes, and the results, in his case, would seem to show that the unleached are not more valuable than the leached. He thinks that ashes which have laid some time after being leached, are much more valuable than when they are applied immediately after leaching. He informs us that this is also in accordance with the experience of several of the Long Island farmers with whom he has conversed. We are aware that results do not appear to have been uniform in regard to the action of ashes, but we have heard the same views as are held by Mr. Crispell frequently given by other farmers.

CULTURE OF MUSTARD.

Several subscribers, among which is our friend C. J. Sanders, Esq., of Lexington, Ky., have requested an article on the cultivation of mustard. Our own experience in its culture is very limited. Several years ago we raised a small crop, and the method we practiced was as follows: The soil was a sandy loam. The seed was sown in drills, with a turnep drill; the rows about sixteen inches apart. The spaces between the rows were kept clean by the hoe. This was the white mustard. The black variety is larger and requires more room.

Mr. James H. Parmelee, of Duncan's Falls, Ohio, raised last year, twenty-seven acres of the black or brown mustard. We gave an account of this crop in our last volume, page 354. It appears that it was planted in hills one foot apart one way and two feet the other, the crop being well worked during the season. The twenty-seven acres produced, by Mr. P.'s account, 457 bushels, or nearly seventeen bushels per acre. It may be sown as soon as the ground is in proper condition to work.

COTTON CULTURE IN ALABAMA.

East India Cotton.—We give the following extract from a private letter of our esteemed correspondent, Dr. Cloud, of Macon county:—"Enclosed I send you a small sample of a variety of *East India* cotton, which grew at my place the past season. The stalk from which this sample was taken attained the height of thirteen and a half feet, had on it at frost sixty-two bearing limbs, and measured fifteen inches in circumference between the two first limbs from the ground, and contained at one time, about the first of September, upward of twelve hundred bolls, blooms and squares! My opinion is that this variety promises to make a great produce in our climate. The stalk now stands in my yard as its own witness. When other cotton was selling at four and half to five cents per pound, last fall in Montgomery, I was offered fifteen cents per pound for a sample of this. It is the true green seed, the natural tendency of our climate and soil, and therefore the kind upon which our improvements should be made."

Alexander McDonald, of Eufalla, Alabama, writes us in reference to the unprofitableness of the cotton crop, as follows:—"Our most valuable and important southern staple has gone down so low as to pay but poorly for its cultivation and preparation for market; but the present low price of cotton will work its own cure. We will, in all the south and southwest, be taught that most important and useful lesson, that it is the true interest of the farmers throughout the cotton growing sections, to raise a full supply of provisions, and after they have done that, to divide the balance of the labor between cotton and other valuable articles. I will mention two at this time, to wit, wool and silk. There will no doubt be great falling off the present year, 1845, in the amount of cotton planted, as it is the greatest folly imaginable to make cotton to purchase any article that the soil and the climate afford, to say nothing of the imperious necessity as well as propriety of our raising our own provisions of every kind."

Mr. McDonald takes particular note of all his farming operations, and informs us that his memoranda for 1844, amounted to 183 pages. He also informs us that he has produced a good supply of provisions, in addition to the cotton crop, which latter he says is the finest article he has ever seen.

HORTICULTURAL ITEMS.

(Condensed from the Gardener's Chronicle.)

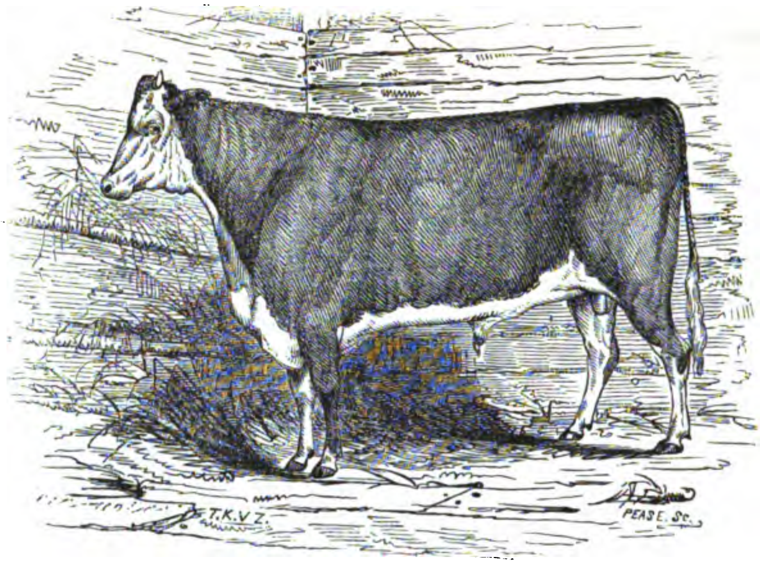
Gas Tar *vs.* Rabbits and Mice.—William May, of Bedale, Yorkshire, says he has tried this substance repeatedly for some years upon the fruit trees in his nursery, and in all cases it has kept off hares and rabbits, without the least injury to the trees. But it is necessary to apply it in winter while the trees are in a dormant state, as at any other season it destroys them. (Would it not be a simple and efficient remedy against the nibblings of mice, so often destructive to our fine young trees in winter?"

Authority for Names.—During some discussion in the agricultural part of the Gardener's Chronicle, dictionaries having been cited as authority, the following facts are stated:—Melocoton (the name of a peach, generally written Malacotoon) is evidently from Malum cotoneum of Pliny, which was our quince; it has hence been applied to certain yellow peaches, from their resemblance in color and skin, to the quince. A correspondent of the paper says, "In some fruit catalogues, I find it changed to Melocoton and Mallacoton; in English and German dictionaries, I find the original pure Melocoton, but for an explanation I must turn over to Melicotony, where I see it translated "a Quince," "a Peach." Not satisfied with this information, I referred to a Spanish and English dictionary, where in the mean time, it had grown into "a peach tree ingrafted in a quince tree!" (This is about equal to Virgil in his second Georgic, where, leaving fact, and running wild into imagination, he speaks of walnuts engrafted on arbutes, apples on plums, and beeches on chestnuts; adorns the wild ash with the white blossoms of the pear, and represents swine crunching acorns under elms. In keeping with the whole of this, he finally gives life and sense to his engrafted trees, making them wonder at the unknown leaves and fruits with which they are loaded. Equally sensible, but infinitely less poetical, are the stories which go the rounds of the papers every few years, of budding peaches on walnuts and on willows, &c.)

Covering for Flower Beds.—It is an excellent plan to cover clumps with moss, to prevent the soil getting dry in hot weather, for which purpose it may be skinned off in large patches, and neatly laid down, which gives it a fine appearance. By occasionally watering it in dry weather, and especially shaded by shrubs and trees it will keep fresh for the season.

Asparagus.—A correspondent says, "I have an asparagus bed, 30 feet by 5 feet, on which I put one hundred weight of salt, about the middle of March, last year, and also this year. The increase of crop, both with regard to size and number, is most extraordinary." In another place, a case is given where too heavy and often repeated a dressing of salt, destroyed the asparagus, though the precise amount of this over dose is not given.

Scientific Words.—The terms *sporæ*, *sporulæ*, *sporidia*, &c. have either been applied synonymously or vaguely by different authors. The more modern practice appears to be, to use *sporulæ* for the ultimate granules, analogous to seeds; *sporidia*, for the cases or vessels containing them; and *sporæ* for an additional covering, which sometimes includes several *sporidia*.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HEREFORD BULL-CALF "POMARIA."—(Fig. 00.)

The above is a portrait of Pomaria, the bull-calf which received the first premium, Class first, of the New-York State Agricultural Society, at the exhibition at Poughkeepsie, 1844. He was bred by Messrs. Corning and Sotham, and, together with a superior heifer calf of the same breed, has been purchased by A. G. Summer, Esq. of Pomaria, South Carolina. Besides these fine animals, Mr. Summer puschased here, eight South Down ewes, and six Cotswold ewes and a buck-lamb. The sheep were all very good—both lots showing the peculiar excellencies of their respective breeds. The South Downs were from Mr. C. N. Bement, and the Cotswolds from Messrs. Corning and Sotham. These animals left here in November last for their southern destination, and we have since learned of their safe arrival. We have no doubt they will prove an important and valuable acquisition to that section of country.

ANALYSIS OF KENTUCKY SOIL.

Tired Fields soon recover when in Grass--Rotation of Crops.

To the Editor of the Cultivator.—I analysed many specimens of Kentucky soil last spring. They were taken from land worth about fifty dollars per acre, in Clarke county, fourteen miles east of Lexington. I will send you three specimens.

No. 1, was taken from land that produced the fall previous one hundred and forty-one bushels of shelled corn to the acre. This field has been in cultivation about fifty years, and had twice been in clover, each time two years. The last time it was in clover I had hauled upon it about fifty (one horse) cart loads of rotten chips mixed with spent ashes, to the acre, from the place where most of the wood for family fires had been chopped for the last fifty years. The ash hopper stood near, and after the potash was extracted, the spent ashes were thrown with the chips.

No. 2, has been cultivated about the same length of time; has been once in clover, and once in blue grass and clover; five years altogether in grass; had cattle fed all winter upon it whilst in grass; produced about one hundred bushels of shelled corn to the acre.

Both fields were planted with large corn, three feet nine inches by three feet six inches apart in the hills, and were thinned to four stalks in a hill. The season was uncommonly favorable to the production of corn.

No. 3, was clay, taken from a hole three feet below the surface.

	No. 1.	No. 2.	No. 3.
Soluble. vegetable and other matter,	7	6	0
Insoluble vegetable matter,	12	12	0
Alumina,	17	6	24
Magnesian lime,	21	25	26
Phosphate of lime,	3	2½	3
Iron, (red oxide, shot ore, gravel)	7	4	12
Quartz, flint and sand, very small fragm'ts,	30	41	33
Loss,	3	3½	2
	100	100	100

Magnesia constitutes about one-fifth of the lime, and the clay has in it eight per cent of potash. It is a general impression here that there is no sand in our soil, and to find one-third sand is truly astonishing. I could not believe it at first, and added potash to some of it, and with a blowpipe made glass. I took, subsequently, two hundred and twenty-nine parts of the sand that had resisted nitric, sulphuric and muriatic acids, and melted it with potash, and afterwards found that one hundred parts of it was iron, lime and magnesia, so there is not as much sand as my tables show.*

It is truly astonishing how soon our old fields, when worn down by long continued and excessive cropping, regain their primitive fertility when sown in grass. The above analysis shows that all they want is vegetable matter. And even on hill sides, where all the soil is washed off, so as to expose the clay, as soon as there is added vegetable matter, it becomes productive again, and the above analysis of clay shows that it has all the elements of fertility except vegetable matter.

My most productive field, No. 1, did not produce more than thirty bushels of corn to the acre eleven years ago, when I first got possession of it. It has been improved mostly by clover and hauling manure upon it. No. 2, was likewise exhausted so that it would not have produced more than thirty bushels of corn to the acre. It has been improved by clover, blue-grass and feeding stock upon it, so that they deposited their manure in the field where it was wanted.

To restore an exhausted, or rather tired field, it should be sown in grass, and stock fed upon it during the winter months. Hogs fattened upon tired land enrich it very much. It may be true that they fatten faster in a close pen, but when they are fed on ground that is intended for cultivation they will greatly increase its productiveness. One hundred hogs fattened upon ten acres of worn land will increase the produce of that land in the next corn crop at least two hundred bushels. This being the case, how very wasteful to fatten hogs in a little pen by the side of the creek, branch or pond, where all the manure is washed into the water and is wasted. I do not speak of those who scrape up their manure and haul it upon their fields. They do not live about here. Very few of our Kentucky farmers have as yet engaged in hauling out manure. And why should they, when by a proper rotation of crops, and feeding upon the fields whilst in grass, they may make their manure so much easier in the fields where they want it?

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* This experiment was made from sand after it had resisted the above acids. The lime, magnesia and iron, in this last experiment, were about in the same proportion as in the others. This reduces the sand to a less average than twenty per cent, and a part of this was incombustible vegetable matter.

When a field is much exhausted it should be kept in grass four or five years. In this case there should be sowed three quarts of clover seed, the same quantity of timothy (*Phleum pratense*) seed, and half a bushel (in the chaff) of blue grass seed to the acre. If the field is not much exhausted, two years will be a sufficient time in grass, and the blue grass seed may be omitted. The grass may either be fed off to stock or mowed. If the latter, the hay may be fed with other food, on the same ground, to stock cattle. The soil will improve much faster where stock are fattened than where they are only fed so as to winter them. The ground is enriched in proportion to the richness of the food that is fed thereon.

When the grass is plowed up, two crops of hemp may be taken, a crop of corn, oats fed down to hogs, corn again, wheat or rye followed by grass sown upon it in the spring. Thus in an eight year course, giving two crops of hemp, two of corn, one of oats, one of wheat or rye, and two of grass. Land will improve under this course if stock are fattened upon it the two winters it is in grass.

Another shorter rotation is two crops of corn, rye fed down by hogs, grass seed sown upon the rye in the spring after it is sown, grass two years with stock fed or fattened on it during winter. Land will also improve under this course, and the second crop of corn will be better than the first, in years equally good. In the first case also the second crop of hemp will be better than the first. The soil will be rotted the second year, and there will be much less labor in cultivating the ground in corn.

I could never get grass to come well when sowed with oats, if I put on a sufficient quantity of oats to insure a good crop. Wheat is often injured by the early start of the grass in the spring, producing the rust in it. Therefore I prefer putting in my grass seed with the rye crop. I have had clover come very well, however, when I would only put in a small quantity (half a bushel) of oats to the acre. SAML. D. MARTIN.

Colbyville, Ky., January, 1845.

RESULTS OF EXPERIMENTS

In the Culture of Indian Corn, Wheat and Potatoes.

MR. L. TUCKER—Last spring I made an experiment on my corn crop, with compost prepared in the following manner: Took twenty-five bushels leached and unleached ashes, ten bushels plaster of Paris, sixteen bushels lime, and about fifty bushels fine sheep manure, mixed the whole together on the barn floor, and dissolved the lime with beef and pork brine. After thorough mixing, the compost heap had the appearance of the grey plaster. I put one handful in a hill of corn until I found I should not have enough to go over the field, which was about twelve acres. I then reduced the quantity to one handful to two, and even to three hills.

The field selected was the poorest on the place, and I was told I could not possibly have over half a crop of corn. It had been in wheat last, and laid out one summer without clover; hence the prospect was not very encouraging. Some of my neighbors rather quizzed me about the compost; but when husking and hauling-in time came, they were amazed. The corn grew surprisingly. It was very tall, although the cut and grub worms and blackbirds worked on it to such a degree that I replanted at least one-third of the field about the 20th May. The crop was as good as any in the neighborhood, if not better—hauled twenty-six wagon loads of seventy bushels each. Some of the ears were so high upon the stalks that my hired man of six feet could not reach the top of the ear. The corn planted was the large and small yellow, and was all hard. Where the handful of compost was put, was the best corn; as the quantity was diminished the difference was perceptible.

I have tried an experiment on two bushels wheat sowed. When it is harvested, I will communicate to you. I also tried an experiment on my last year's wheat to prevent smut. One portion I washed and soaked with salt brine, dried with quick lime; another portion I washed and dried with lime; and another lot spread out, made wet with a watering can, and dried with lime. The former was almost clear from smut, whilst the second and third lots were considerably smutted—the second not so much as the last.

I put ashes and plaster on my potatoes when planted, and so far they prove good.

CHARLES COLFELT.

East Kishacoquillas Valley, Pa., January, 1845.

PRODUCTS OF THE DAIRY—NO. III.

WE intimated, in closing our remarks upon this subject last month, that we should make some suggestions as to "the means which should be adopted to secure the greatest increase in quantity and improvement in quality of dairy products." Before attempting this, however, let us first see what is the quantity now actually made in most of our dairies. Upon this point we have very little positive information, and must rely mainly on the opinions of dealers and persons who are well acquainted with the dairy business. Our intercourse with farmers and dairymen has enabled us to judge perhaps with some degree of correctness, especially as we have hundreds of times asked the question, "How much butter or cheese do your cows average in the season?" To this question we have received various answers, some putting the amount as high as 200 lbs.; others at 150 lbs.; and many nearly or quite as low as 100 lbs. of butter. We suppose that two and a half pounds of cheese are about equivalent to one of butter, so that the range in the average of cheese dairies would be from 250 to 500 pounds. Our own conviction, strengthened by the opinion of a number of dealers in dairy products with whom we have consulted, is, that the average production of butter cannot exceed 125 lbs. per cow. The average product of cheese cannot much exceed 300 lbs. It is not asserted that these are the actual average products, but the amount here assumed will be found, on a careful inquiry, very nearly correct. The extremes, as before stated, are far above and below this amount.

For the purpose of showing what may be done with good cows and good management, we now propose to give a few statements which have come under our notice, or been communicated to us by persons engaged in this business, and to give our readers an opportunity of judging correctly in the premises, we shall accompany the statements, as far as practicable, with an account of the measures pursued to arrive at the results spoken of.

We will first give some extracts from the report of the committee on cheese dairies to the New-York State Agricultural Society, February 13th, 1845. From that report we learn that Mr. Abraham Hall, of Floyd, Oneida county, has made the past season, from forty cows, 23,427 lbs. of cheese, and 200 lbs. of butter. This is an average of five hundred and eighty-five and five-eighths pounds of cheese per cow; and if we add the butter, we have equivalent to 598 lbs. of cheese per cow. To accomplish this, Mr. H. informs us that he has 100 acres of pasture, (in addition to the cows, four horses and three dry cows are kept,) of good quality, though not very abundant, and about fifty-two acres of meadow. Cows are supposed to consume about two and one-fourth tons of hay each, as they are fed in stormy weather in summer as well as a full supply in winter. Has not fed sixty bushels of grain to cows. The whey was all fed to twenty of the oldest cows, and Mr. Hall has no doubt that the twenty cows to which the whey was fed have made full 700 lbs. each. Cows come in from the first of April to the first of May. They have access to salt at all times, which is considered important. The cows are well selected, regularly milked, and attended to in every respect. The cheese is made with great care and attention, and brings the highest price in market, having been sent to Philadelphia for several years past, but the last year a considerable portion of it was shipped to England. There will hardly be spare room in this article to give the details of the process of manufacture. We hope to hear more from this dairy next year.

From the same report to the State Society, we learn that Mr. Alonzo L. Fish, of Litchfield, Herkimer county, has made during the last season, previous to the 17th of September, an average of 592 lbs. per cow; and Mr. F. estimates the quantity for the season at 700 lbs. The average, the last three years, from twenty-five cows, has been 590 lbs. Mr. Fish also feeds the whey to his cows, and about the first of August commences feeding cornstalks, raised broadcast, once a day, to keep up a full flow of milk. While giving milk in winter, the cows are fed four quarts of shorts or one peck of roots per day. The dairy furniture and fixtures, buildings, &c. are convenient, and all well attended to. Here is an annual product of $41.40 cents from each cow for three years in succession; a handsome product truly in these times of low prices. Mr. Fish received the first premium from the State Society for the best managed cheese dairy.

Mr. Elisha Baker, of Bridgewater, Oneida county, made in 1843, between April 15th and December 1st, 10,000 lbs. of cheese and 1,000 lbs. of butter, making an average of 500 lbs. of cheese and 50 lbs. of butter from each cow. In addition to hay and grass, the cows were fed two quarts of oat-meal per day, mixed with the whey from the dairy. The cheese was sold at five cents and the butter at fourteen cents, making thirty-two dollars per cow.

We have thus glanced at some of the *large stories* from cheese makers, which are sometimes doubted, and often pronounced false by those who have no idea that any one else can make more than they have done, and are unwilling themselves to make even an effort to go beyond the old mark. These cases might be multiplied to almost any extent, had we room. Suffice it, however, to say, that there cannot be the slightest doubt of the correctness of the foregoing statements, and that the amount stated was actually made.

Let us now glance for a moment at the causes which have produced these results; results so different from those in common dairies. In the first place we find a good selection of cows, every one of which is capable of making as much as the best in many of our dairies. Where is the dairyman who has not in his yard, cows which will make nearly twice as much as others kept in the same manner, and treated in precisely the same way in all respects. This has been our experience, and we have no doubt that it is so almost every where. Now, if we select for our full number, cows of this character, the product will be at once greatly increased, without any additional allowance of feed. But where are these cows to be had? All farmers cannot have the best, it is true, but nearly all may have better animals than they do, by proper selection, if purchased, or by more care in breeding, if raised by themselves. The truth is, very little attention has been given to the breeding of dairy cows, and too many dairymen depend on keeping their number good by purchases from *droves*, which are picked up in sections where little attention is given to dairying, and driven into the dairy districts to sell. Many of these are good animals, and many of our dairymen are good judges of cows, but we often hear them complain of the difficulty of purchasing good cows. We must raise more heifers expressly for the dairy, with direct reference to their milking qualities. But we have been led from the legitimate train of our remarks, to glance at the subject of breeding dairy stock, which we have not time to pursue.

Cows, to produce large quantities of milk, must have warm, well ventilated stables, and a full supply of suitable food. So important is the first point considered, that very few farmers now allow their cows to remain in the yard in cold weather, and when they are secured in good stables at the first approach of uncomfortable weather, and kept warm and well fed until they get a full bite of grass in spring, they will hardly fail to remunerate their owners for the extra expense. There can, however, be no extra expense in point of fact, for cattle kept warm will consume far less than when exposed to the inclemencies of the weather, in this severe climate. In the cases of Mr. Hall and Mr. Fish, above referred to, very little grain or roots were fed, the principal addition to the usual food being the whey, instead of feeding it to hogs as is usually practiced. These gentlemen, with many others with whom we have conversed, are of opinion that as many pounds of cheese may be made from feeding the whey, as of pork, while the value of the former is usually greater than that of the latter. Mr. Baker fed about two cents worth of oat-meal, besides the whey. For this he doubtless was well paid.

The great secret, however, in managing cows, consists not so much in the amount of food given as in the regularity with which it is given, and the care and attention bestowed upon them at all seasons of the year. They should of course be fed liberally in winter, and more especially in fall and spring, and have, during summer, an abundance of suitable pasture, and plenty of pure water and salt. They should be milked regularly and quickly by the same person every day, if possible, and treated with *gentleness* and *civility*, (an important feature in dairy management, which many persons have not yet learned,) so as not to worry and disturb them, either in driving or in milking.

We have given the product of several cheese dairies in which a little extra feed was allowed, and for the purpose of showing that large products may be obtained without extra feed. We now propose to give the product of a few butter dairies within our acquaintance, assuring our readers that we are acquainted with the individuals on whose statements we depend, and that there cannot be the slightest doubt about their correctness. We do not intend here to give extravagant accounts, but such as will show what may be done by good care and moderate feed.

Mr. Porter, of Western, Oneida county, has a dairy of twelve cows and three heifers, one of them three years old, and two of them two years old. From this dairy he has made the last season, 2,600 lbs. of butter for market, besides supplying a family of seven to nine persons during the year. This, it will be seen, is 173 1-3 lbs., and if we add the amount consumed in the family, the quantity can fall very little, if any, short of 200 lbs. Mr. P. says—"We winter our cows on hay principally. After they come in, in spring, we allow them three quarts of oat-meal each per day, until they are turned out to grass. In my opinion the whole secret about making a large quantity of butter is to keep the cows well through the winter; keep them in warm stables, and feed a little grain in spring. They must of course have an abundant supply of pasture, and an eye must be had to the management of the milk and butter." This may be set down as a good yield.

Mr. Timothy Wilcox, of New-Hartford, informed us early in November last, that he had made, up to that time, from five cows, 1,135 lbs. of butter. Mr. Wilcox expected to make up the amount to 1,200 lbs. before the close of the season. Besides this, milk was used in the family when wanted. One of these cows was two years old, one three years old, another four, and the others older. *Nothing but hay and grass was fed during the year.* One remark made by Mr. W. struck us as important. It was this: "I have milked these cows every time myself." Here, in our judgment, lies a part of the secret. (We hope when Mr. W. sees this, that he will go at once to the post-office and subscribe for an agricultural paper.)

Mr. Brainerd, of Western, has made from sixteen cows, previous to the 15th of November, 2,720 lbs. for market, besides supplying a considerable family. Here we have 175 lbs. from each cow. This dairy was also kept on hay and grass alone, (except about 150 pumpkins in the fall,) but they were well fed and well attended to.

It is unnecessary to multiply instances, but we will say, in addition, that our friend Lewis Eames, of Lee, has uniformly made from 160 to 180 lbs. for market annually. The dealers in butter all agree that where such large quantities are made the quality is uniformly good; better than when small quantities are made. Good attention to one branch secures, in a great degree, success in the other.

The remarks made in regard to selection of cows, and their management for cheese dairies, apply equally well here, and we can only say that to equal, and even excel, the individuals we have named, farmers have only to procure good cows, give them good feed, both summer and winter, see that they are at all times protected from cold and stormy weather, have plenty of pure water and free access to salt, are regularly milked by careful hands, and finally that the milk and the cheese or butter, as the case may be, are properly managed. These constitute the essentials in dairy management—essentials which may be attained in almost every particular by all dairymen. It is easy to see that while, in the usual method of managing cows, very little profit can be realized, the results arrived at by the individuals named, (and there are scores of similar cases,) cannot fail to afford a very handsome profit from their labor. It costs scarcely any more to keep a stock of cows in good order throughout the year, than to let them get poor, and then by extra feed raise them again to good condition. Now, we hold that three-fourths of the dairymen in this country may, by simply having warm and well ventilated stables, feeding and milking regularly, and treating their cows gently, increase their products considerably, without one dollar of additional expense; and if a few bushels of grain or roots be added in the winter and spring, the *profit* will be greatly increased. Of the method of managing the milk and manufacture of butter and cheese, we have not room to speak in this article, but will endeavor to speak of some points connected with that subject hereafter. The cases to which we have alluded are not extremes, but are frequent in many parts of the State; yet not one in one hundred reaches the amount named in these statements.

The season for commencing dairy operations will soon arrive; indeed, the time for giving increased attention to dairy cows is now at hand, and we appeal to all, so far to consult their own interest, if they have no mercy for their animals, as to look well to the care of their stock during the coming spring. We also respectfully suggest to our agricultural brethren, the propriety of endeavoring to increase the products of their dairy, as well as of all crops and productions of the farm, the coming season. We *can* improve in these as well as other branches of agriculture. Shall we not say that we *will* improve in these things? Let us not be disheartened by the assertion, so often thrust in our faces, that we now raise more than we need of agricultural products. Or if this is really so, let us keep fewer cows, and make from them the same quantity which we now make from a greater number. And so with our crops; let our motto be, "the greatest amount of produce at the least expense." Profit is our object, and how shall we secure it except by cheapening the cost of production?

E. Comstock.

KNOCKS ON A FARM.

Mr. Editor—I know that you will have considered me, long ere this, "slack concerning my promises;" but each day has furnished some new pledge that "to-morrow" you should have some account of my success and mishaps in my new vocation.

The first of May last found me in possession of a farm of about one hundred and eighty acres of land in this pleasant farming district, with about as much knowledge of my new calling as most plowmen have of a special demurrer. Yet my former experience had taught me that patience and perseverance would overcome almost any difficulty; and relying on these supports I went to work, and, as you might expect, received many "*knocks*," the teachings of which will be long remembered. There was growing on my farm, when I took possession of it, twelve acres of wheat and six acres of rye. In order that the crop might be good, the seed had been procured at the west, and at a high price. A part of the crop was sown on greensward turned under, the soil being low and moist. The result, when harvest came, was forty-two bushels of ordinary wheat and eighty-eight bushels of chess. As soon as the half-bushel had shown me the quantity of each, I seated myself in my big arm chair, placed my feet on the office table (attitude is everything) and commenced looking over the list of premiums for the next State Fair at Poughkeepsie, supposing, of course, that my chess crop would entitle me to number one. But finding no bounty offered for my crop of chess, I consulted the back numbers of the Cultivator (and these have been my indispensable oracles) to find some information as to the quality of my abundant harvest. While, however, but little light was afforded by the treatises, much amusement was enjoyed from the sharp controversy which has been carried on among the agricultural community on the "transmutation of wheat"—the "book men"[*] claiming the transmutation of wheat into chess to be a violation of the laws of nature, and the practical farmers maintaining that the severity of winter changes wheat into chess. One thing I know, my predecessor sowed good wheat and I harvested good chess; and the best explanation is found in the Book that says: "Thou sowest not that body that shall be, but bare grain; it may chance of wheat or of some other grain."[†]

I cannot, in justice, omit here to recommend a fan-mill made by J. T. Grant & Co., of Schaghticoke, Rensselaer county. It removed all the chess from my wheat, and has cleaned thoroughly rye, peas, timothy and clover seed; in short all the grains and seed ordinarily produced on a farm have been entirely cleansed from their impurities by this mill. I was very careful to examine the various patterns which were offered for sale in your city and elsewhere, and to witness their operation; and I have impartially compared the work of my mill with that of the mills used by my neighbors, and I must say that Mr. Grant's mill is superior to all which I have seen, in the simplicity of its construction, the ease of its revolutions, and the perfect manner in which it performs its work. It is the most finished agricultural implement which I have ever seen, and has deservedly taken the first premium at our state and county fairs.

My corn was planted early, and finding that it did not come up, I examined the hills and discovered in more than half of them two or three small white worms in each kernel, gnawing at the very chit. A second planting escaped the insect, and gave an ordinary crop. Much of the first planting in this section of country failed, and a second was required.

The barley harvest has yielded the best returns, being worth six shillings per bushel, while oats were quoted at twenty-eight cents, corn at fifty cents, and buckwheat at thirty-seven and a half cents.

I have made many efforts to learn to plow, but all my lots had a slight sprinkling of stones, and the plow would jump out, and before I could enter it again the team would be far from the furrow. But I consoled myself with the reply which the boy made to his father when reproved for making irregular furrows: "Never mind," said he, "it has all got to be plowed." More practice another season will improve my skill, they say; at all events it shall have a fair trial.

Yours respectfully,

Ballston Centre, Jan. 20, 1845. B. P. Learned.

Honey is, according to Mr. Milton, who has lately published a treatise on bees in England, a universal specific, and among its other valuable properties, he declares that it prevents consumption, and states that that destroyer of human life is not known in countries where honey is regularly taken as an article of food. Those who have less faith in the specific, may perhaps attribute the cause to difference of climate rather than to honey. The Italian singers, it is also affirmed, are greatly indebted to honey, but their practice is to sharpen it with a few drops of acid, though they sometimes take it in a pure state.

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[*] This is not altogether fair. We have carefully looked over the old controversy in the Cultivator and Genesee Farmer, and find that every writer on the negative side of the question, was, to our certain knowledge, strictly a *practical farmer.*

[†] Our correspondent should have finished his quotation. It reads thus: "And that which thou sowest, thou sowest not that body that shall be, but bare grain, it may chance of wheat, or some other grain: but God giveth it a body as it hath pleased him, *and to every seed its own body.*"—Cor. xv. 37, 38.

NOTES OF TRAVEL IN THE WEST.

BY SOLON ROBINSON.

January 1, 1845—My old acquaintances, the Editors and readers of the Cultivator, I hope will be pleased to see that I have risen with the sun, who shines forth this morning with all the beauty and much of the warmth of a May morning, not only to wish them a single "happy new year," but with the intent of devoting many weeks, perhaps months, in daily intercourse, and agreeable conversation.

In my card introductory, which I have printed for the occasion, I announce myself as "Traveling Correspondent of the Cultivator," and in that capacity I hope to make my notes of travel, as I proceed through the South Western States, somewhat interesting to both Eastern and Western readers.

So far, this has been a remarkably mild and pleasant winter; almost without snow, and no very severe cold weather; and now the warm sun bids fair to carry off the little ice already formed. Bad weather for the growing wheat, which does not look so well as it did last year, and so far as my observation extends, there are not as many acres growing.

Now, Messrs. Editors, and you my dear old friends who have so often told me that you delighted to read my letters from the West, let me in fancy seat you by my side in my buggy, wrap you in Buffalo skins to protect you from the prairie blast, give the word to a pair of excellent mares, (by the bye, I always prefer mares for work,) and we will leave the home of your old friend upon this new day of a new year, and in the course of our long ride, we shall see many things that will be new and strange to you as well as me. The top of the ground is slightly thawed, and has the appearance and consistency of a first rate article of "paste blacking," ready prepared for use; and although we may get an over supply on coats as well as boots, be not alarmed; it will "rub off when it gets dry;" and even if it did not, it will not give us a very singular appearance, for in this respect, all men (travelers) are equal.

The first object of importance that meets our view, is a new church, crowned with the cross, that tells us that we are in the midst of a thriving settlement of Prussian Germans, thousands of whom are annually occupying the tens of thousands of vacant acres of land in this country. They are generally men of but moderate means, and content themselves with second rate land, and conduct their farming operations upon a small and rude plan, and adopt the improvements in agriculture of their go-ahead Yankee neighbors with slow caution. Yet there are some things that we may learn of them. If they do not go over as much ground, they generally do it better. They almost universally use oxen instead of horses; and what is more, you will find their rude log stables plastered up with mud, so that they are as warm and comfortable as their own dwellings, and comparatively more neat; for it must be said that the inside of their houses often presents such an appearance in regard to neatness and comfort, as would be "shocking" to some of my down East lady friends, who look upon a log cabin at best, as a name synonymous with every degree of discomfort.

Eight miles from home, we cross the western line of Indiana, and enter upon the eastern borders of the great prairie State of Illinois, over hills, and through ravines and deep dells, that will give the lie to that preconceived idea that the dwellers upon our broad prairies, inhabit one vast level plain. This part of the State (Will county,) is thinly timbered, and dotted with farms, all of which have sprung into existence within the last ten years, at which time I knew it as one vast wilderness. I spent the night in the hospitable mansion of Dr. Hitchcock, *late* postmaster of "Crete," but who, like many others of the devoted friends of agricultural improvement, who never abused the franking privilege, but sometimes used it to advance that science, has been thrust aside to make room for a more active politician. I visited the Doctor some two years ago, and found him in a very small log cabin, standing upon an unenclosed waste of prairie; and now I find him in a snug frame house, surrounded by a large well enclosed farm. Most of his fence is laid straight, the ends of the rails fastened by short blocks, which he prefers as a saving of timber, (a very important item) to the common worm fence. I objected to this, as less substantial than worm fence, but he assures me that when well staked, and with heavy riders, the wind has no effect upon it, and being straight, he can plow closer, and thus give his fields a better appearance. His lady-like eastern wife, is just such an one as is calculated to make the "new home in the West" comfortable. I found the whole house carpeted with the most beautiful rag carpet I ever saw, all the work of her own hands.

The 2d of January, like the day previous, was another lovely day, for which I was thankful, as I had a dozen miles across an open unsettled prairie, which must long remain unsettled, unless cultivated without fence, or else by some as yet undiscovered method of fencing; for the settlements are already as much extended from the groves upon each side as circumstances will admit, and the experiment of sod fence, I look upon as a total failure. Twelve miles from Juliet, we strike the "Hickory Creek Settlement," one of the oldest in this part of the State, possessing a fine body of timber, good mill privileges excellent prairie, and many well improved farms, the new houses and barns upon which show a thriving Yankee population; there are but few orchards coming forward, and in many cases where houses are situated upon the bleak prairie, there is not a tree or shrub visible. This is a neglect that I cannot too highly censure. Neither can I too highly censure an almost equal neglect to make good roads through so good a country.

JULIET.—This town is situated upon the "Riviere des Planes," (a [illegible] mill stream,) 40 miles south-westerly from Chicago, and containing about 1,500 inhabitants, many of whom, are to all appearance, "hanging on" to the long deferred hope that the Illinois canal that follows the bank of the river, and divides this wide spread straggling village, will soon be recommenced, and restore them to that prosperity that originally built up the place, and in fancy made many rich, and in reality made more poor. The village is situated upon a most sterile limestone rock, covered with barely soil enough to sustain a little grass, and every thing around shows evident signs, that through this mile wide valley, once rolled Niagara's mighty flood, at that period of long past time before the waters had passed the northern boundary at the heights of Queenston, and the thunders of the great falls were as yet unheard and unknown.

One of the most creditable things that I can say of Juliet, or of her half and half dead and alive population, is that during the last summer one of her enterprising citizens, (the Hon. J. A. Mattison,) has put in operation a small woolen manufactory, containing at present four sattinet and one broadcloth loom and other machinery, all finished and operated in the best manner. By the way, I would here say to you that this good firm, fine homespun suit that you see I am dressed in, was colored and dressed at this establishment. As such manufactories are real blessings to this "to be" great wool country, I hope the proprietor will be greatly blessed in his undertaking.

After finishing some business that detained me 24 hours here, I set off in the afternoon of the 3d, to visit one of the largest farms that I know of in this part of the State, situated about 14 miles westerly, most of the way across open prairie. Unlike the two previous pleasant days, this was one that would give us an idea of what a "gentle prairie breeze" was like. The first two or three miles lay between the river and "bluff," a high bank of limestone rock, composed of flat layers from one inch to one foot thick, and affording a most inexhaustible supply of materials for building and fencing, but as yet little used for the latter. As I passed up a ravine through this bluff, and came out upon the high prairie, with the wind "dead ahead," and blowing most beautifully strong and cool, I almost wished myself again by my own warm hearth, and the enterprise that I have undertaken, committed to other hands, supported by a stronger constitution. Here, when the wind blew almost strong enough to start the hair off my horses, were situated several farms, miles away from timber, treeless, barnless, shedless and shelterless for cattle, which stood drawn up into the smallest possible dimensions, under the lee side of a rail fence, while the owner was perhaps complaining that "this is not a good country for cattle."

Passing a little grove, and less village, called Plainfield, on a stream called the Du Page, and upon which there are many fine farms, I struck out again upon the prairie, where I found a variety of what the people are pleased to call roads, none of which seemed to lead toward that point of compass that I thought I ought to go, and therefore I concluded that I would not follow either, and boldly struck off upon the trackless prairie just at sundown, for a four miles drive. Taking, as I have often done before, the wind for my guide, which unlike some friends at some other time, this time proved unchanging, and conducted me safely to my point, without accident, except a slight harness break, while performing that very common feat in this country, jumping a deep creek, before the era of roads and bridges.

After my cool ride, I met with a warm reception in the very comfortable cabin of Major Wm. Noble Davis, (Ansable-grove, Kendall county, Illinois,) whose farm is situated about 2 miles from that beautiful stream, the well known and oft described Fox river, and 40 miles from the great commercial point of all this country, Chicago. The Major, (I insist upon giving him his rather questionable title, as he as well as every body else hereabouts, insist upon bestowing upon me the title of "Judge,") located upon this lovely spot about ten years ago, and by the purchase of an "Indian Reserve," secured about 500 acres of timber, that is now worth from $30 to $50 an acre. To this he has added about 1500 acres of as fine rolling prairie as fancy could wish, about 1100 acres of which is under substantial rail fences, mostly divided into lots of 80 acres each, all having suitable watering places for stock, which in the shape of horses, hogs, cattle and sheep, particularly the latter, abound in proportion to the size of the farm. Indeed, I believe he intends in time to make a sheep farm that will produce an amount of wool that will make some of the down east 100 acre farmers look with wonder, and wonder if such things can be. He has one little patch of Kentucky blue grass, of 160 acres. He has as yet but one barn, but that is a most noble one; but let me tell you, his cattle and sheep are not under the necessity of lashing themselves to the fence to keep from blowing away, for he has erected "cheap sheds" enough to shelter every hoof. He intends in the course of a couple of years more to get the remainder of his prairie under fence and in cultivation or seeded down to grass, and then with a well fenced 1500 acre farm—well what then do you think he intends to do? why, then he intends to *build a house and get married*. For be it known, and ye down east marriageable girls take notice, that this Illinois grandee is not yet a *very* old batchelor, only 36, fine looking, full of life, and as soon as he can get a nice, "snug little farm" ready, will also be ready to give you a call. But not till after "the new house advent." For be it known to his thousand and one eastern acquaintances, that he now lives in a log cabin that would be a rare show to some of his Broadway friends.

Major Davis has introduced some fine improved horses, cattle and sheep, the benefits to the country from which, will be long felt by others as well as himself. He has also set an example in the way of fruit trees, well worthy to be followed. As I have so many individuals to notice, I cannot of course, spend too much time individualising stock and improvements.

On Saturday, I intended to have gone on my way rejoicing, but who ever escaped from the Major with only a one night visit, (he studied hospitality in a southern latitude,) and that, connected with a slight indisposition, brought on by the strong lime water of Juliet, not only kept me over Saturday, but there also I took a Sabbath's quiet rest.

On Saturday afternoon, the Major drove me up to Oswego, 2½ and Aurora, 7 miles, two flourishing villages on Fox river, at both of which the river as well as at numerous other places, affords the best of water power, and at the latter is one of the best finished flour mills of 4 run of stone in the State.

Here we visited a picket fence making machine. The pickets are sawed by a circular saw, out of boards, and then passed through a set of cutters that round and sharpen them, and are put in girts also bored by a machine, and these lengths are set up crooked like worm fence, without posts, being held at the corners by one of the pickets passing through each girt, and as it is sold at 75 cents a rod, will answer well to fence prairie, where rails cannot be had for a less cost. But as it takes 14 rails to make a rod of as good fence, it is easy to calculate which kind of fence will be the cheapest. At present, while we cultivate so poorly, and do not average 10 bushels of wheat to the acre through a series of years, we cannot afford to pay 75 cents a rod for fencing, besides the cost of hauling and putting up, and then as most of us do, carelessly risk its being burnt by the annual fires that destroy thousands after thousands of rails every year.

Many of your Orange county readers will be interested to hear that I visited an old resident of that county, by the name of Townsend, who with several of his children, live in the same grove with Major Davis, and own about 3,000 acres of fine land. From Mr. Townsend I first learned that fowl meadow grass, which is one of the most valuable kinds that I am acquainted with for wet prairie, is indigenous to the country. By conversation with the old gentleman, I also became satisfied of what I had long believed, that what we call "blue grass," is a different article from what is known at the east by the same name. The eastern blue grass he thinks much the best. Neither of the kinds are profitable to cultivate for hay, but for fall and winter feed, particularly for sheep, exceedingly valuable.

I ought to have mentioned before, for the benefit of others who are beginning to make sheep farms, the manner which Major Davis constructs "cheap sheds"—two rows of posts about 15 feet apart are set up to sustain poles laid up in the same form of a log cabin roof, and small poles or brush laid on to sustain a covering of hay or straw, and the back side is completely filled with rails set up slanting and also covered, which not only makes a nearly tight roof, but a complete wind breaker, that will pay the cost in one winter. He fodders his sheep without racks. His method is this. The ground being well covered with straw, the sheep are driven into another yard, whilst the wagon, loaded with hay, is driven in the empty yard, and the hay laid in rows. The sheep being now let in, commence taking their places without running over the hay or wasting more than when it is fed in racks or boxes, and none gets in the wool. I believe it promotes the health of sheep to allow them every pleasant day to have a range in the bushes. I have no doubt but that many who have driven sheep to this country during the last summer, will find it a bad speculation before spring. It was the worst of seasons to drive, and drove sheep never get through the first winter without great care and some loss at best; while there are tens of thousands brought here without any kind of forethought of preparation for shelter or comfort, except what they may gather from a poor supply of prairie hay and such shelter as they can find under a rail fence, or upon the open wild waste. Such conduct is reprehensible, as not only cruel, but as a wicked waste of the lives of such valuable animals. This is a good sheep country I shall insist, until convinced by proof to the contrary; but they cannot live upon prairie wind, and sleep in knee deep prairie mud.

On Monday, I passed on my way down Fox river, crossing at a very poor county town of a very good county, on a very good bridge, but one that is only good in very cold weather, as I witnessed higher up the same stream last week, as it failed on a warm day, and let a pair of horses and wagon through; but by which I had an opportunity of witnessing the operation of getting a horse out of a hole in the ice, by drawing a rope tight round his neck until he chokes and floats to the top of the water. I stopped this night with an old farmer from Lycoming county, Pennsylvania, who had sold a comfortable "old homestead," and in his old age sought a "new home in the west;" and what do you think he has found? a fac simile of his mountain streams and clear springs, and tall trees and useful rocks? Oh no: he has got none of them. But he has bought 400 acres of land—rich land—200 of prairie, and 200 that is neither timber or prairie, plow land or meadow, but covered with a growth of small oaks, fit only for fire wood, while his rails must be hauled from 3 to 6 miles, and cost $2,50 or $3 a hundred.

The whole tract cost $3 an acre, 50 acres under improvement with poor buildings, destitute of water, and several attempts to get good well water, have failed at 70 feet deep. And for such a home as this, the "old homestead" was parted with. I mention this circumstance, to show that emigrants do not always better their situation, when they leave substantial comfort in the east to pursue a vision of acquiring numberless acres of wild land in the west, however rich the soil of those acres may be.

Ten miles north of Ottawa, is "Indian creek," now occupied by a flourishing settlement, where, in 1832, the few inhabitants then there were the victims of the "Black Hawk war." Here is a body of good timber, which is the nearest timber to tha town. The space between this settlement and Ottawa, being unoccupied prairie. Four miles above Ottawa, there is about 20 feet fall over a rocky bed of the Fox river, partially occupied by a saw-mill and flouring mill of five run of stones, and a woolen manufactory of 4 satinet, and three broad looms, &c. As such manufacturing establishments are as yet so rare, although so much needed, I like to note all that come in my way. Here too, appears to be the northern boundary of the great coal field of Illinois. The abundance of coal that exists in the Illinois river valley is of immense importance, and more so on account of the scarcity of wood—coal at Ottawa is worth about 5c. a bushel, but it is not of first rate quality, being dug near the surface of the ground in the river bottom. By the bye, I wish you to notice that this phrase "river bottom," does not mean the bottom of the river, but what Eastern readers understand as "interval."

Ottawa is situated on the Illinois at the mouth of Fox river, and head of steam navigation in high water, and having been settled and built up during the canal fever, also contains many "hangers on," and from present appearances in the legislature, they are destined to hang on some time longer, before the canal is completed. And I would also here caution many of your down east readers, who have purchased land along the line of this canal at high prices under the expectancy of its early completion, that they are also "hanging on" to a very brittle prospect—and for my own part, until I see some vigorous measures taken to complete this important work, which when done will relieve the state from one portion of her debt, I shall believe that she does not intend ever to pay any part of it. There is a Court House at Ottawa, built when the whole country were building castles *on credit*, at an expense of $36,000. As an evidence of very uncommon taste in this treeless country, I notice the yard set with shade trees. As usual in all western towns, where land was so dear and scarce, the streets are narrow and lots small. Even the principal hotel, to save room upon the surface of such valuable lots, has its dining room below. I attended a thinly attended scientific lecture at a neglected looking Mechanic's hall; at which I did not wonder, as all interest and conversation seems to be centered upon "canal! canal! canal!"

On the 8th of Jan. I ferried the Illinois in a most violent snow storm, and amid floating ice, being impelled to do so by the prospect that in an hour more all chance of crossing would be at an end, except upon the ice, which in several instances had already caused the loss of several teams this winter; and of the two dangers I chose the least and got safe over. But not so at an unbridged creek, three miles along the river road, where the ice gave way and gave me an upset into the water, mud and ice. That such a creek on such a road so near such a town, should remain for years unbridged is not singular, for who ever knew little works attended to where great ones, like this great canal, absorbed all minds. But for my consolation for my misfortune, I was assured that hundreds had met with worse ones at the same place. The great neglect of roads that manifests itself throughout this country, goes far towards creating a prejudice with strangers against any new country they are passing through.

I spent the night with a very intelligent farmer by the name of Baldwin, at "Farm ridge" on the Vermillion. Here is a settlement of Connecticut farmers, who have brought abundance of enterprise and industry with them, as is manifest by the appearance of good houses, barns and orchards. The only thing lacking to make this lovely land very desirable, is timber which is here, as everywhere, too scarce. The Vermillion, however affords excellent mill sites, and abounds in coal of good quality. The coal is in three beds, the lower one in the bed of the stream. The banks are high bluffs of clay, coal and limestone. Vermillionville is one of those many towns in the west where people have learned by sad experience that they cannot live upon a little "7 by 9" town lot. Though many have moved out, there are some enterprising citizens left, one of whom is the new postmaster, Dr. Bullock.

The nature of the soil along the Vermillion, is from 1 to 3 ft. black loam, then several feet clay, then sand, in which is found water. Natural curiosities in such a country are scarce, but near the mouth of the Vermillion are two—one, the "Deer-park," is a chasm in the rocks several hundred feet deep, a few rods in width and half a mile long, having an opening next the stream, into which deer used to wander after a "salt lick," and fall an easy prey to the Indians. The other is the celebrated "starved rock" on the Illinois, noted in history as the spot where a small tribe of Indians were driven by another tribe and besieged till starvation alone conquered the bravest of the red braves. From the Vermillion I passed over a dozen miles of beautiful country to Granville, a fine little town in Putnam co. beautified by a handsome church and a very excellent school. Spent the night with a Mr. Ware from Massachusetts, who with his brother have set their neighbors an example in farming and improved stock worthy of imitation.

During this day's ride I passed a "long ditch" in the woods at Cedar point, which I was informed, was "the great Central Rail Road of Illinois," *that was* to lead from Galena, crossing the Illinois at the termination of the canal at Peru, to the great city of Cairo, at the mouth of the Ohio. Six miles southeast of Granville, is "Mt. Palatine," a Baptist settlement and school, four miles out upon the wide prairie, solitary and alone, so far as regards timber.

Near Magnolia, which is a flourishing new town, 8 miles from the Illinois river, in which for the want of water power, steam is used, I spent a night with a Mr. Patterson from Pa.; and from his English shepherd, I learnt that he esteems bran slops, the best food for sheep dropping lambs in winter; and the condition of those on hand went far to prove it. As some criterion of the price of land in this vicinity, I learnt the sale of a two hundred acre farm, about 80 improved, 60 timber and balance unenclosed prairie, with very moderate buildings for $2500—the seller being bound for that new "Eldorado," of our restless population, the Oregon territory.

At Magnolia, I saw the first sugar maple; the timber northward being mostly oak. Upon Mr. Patterson's land, I also witnessed the astonishing increase of timber, when kept from fire—a matter not sufficiently thought of in this country—a country where tens of thousands of acres of rich soil can never be fenced except by growing the materials.

From Magnolia to Washington, I passed over some poor, uneven, barren, much uncultivated prairie, few and poor mill streams, through the very poor county town of Woodford co. (so named perhaps to indicate that the county is *not all* prairie) to the latter town, which lies about 10 miles east of Peoria, where I saw a large steam mill in operation, and a very extensive pork house, and other evidences of a prosperous state of things. Here after many days of beautiful winter weather, I encountered in the afternoon of January 11th, a furious snow storm with a head wind too strong to beat up against, which drove me into quarters with a homesick Kentuckian, who was longing to return to his "own native land"—and here, after our rambling ride, my dear readers, we will rest until the morrow, when you shall again "go ahead" with your old friend,

SOLON ROBINSON.

IMPROVEMENT OF AN OLD FARM.

LUTHER TUCKER, ESQ.—The January number of your new series has been received, and I should be deficient in gratitude to your able contributors, were I to omit the opportunity to express the obligation I owe them for the valuable information contained in this publication. A single article therein has benefited me now, more than the cost of several years subscription. During years gone by, when your publication was issued from Rochester, most of my substantial ideas of farming were acquired by a perusal of its pages; and these old volumes are preserved and referred to yet, on many occasions, for practical information that I could not otherwise obtain.

I am disposed to contribute to your periodical my share of observation and knowledge of agricultural subjects as justly due to it, but the ground is so completely occupied by abler hands, that I can do but little more than corroborate the great value and practical utility of the plans laid down to increase the fertility of the soil, and improve the manner of its cultivation. But inasmuch as a statement of the method I pursued to produce the same results (though brief, imperfect and a repetition of that which has been better detailed) may be an encouragement to some of your new subscribers to proceed at once to the improvement of their farms, I will endeavor to lay it before them.

Seven years ago my wife and I came into possession of about seventy acres of land. The soil naturally would rank as second quality in this part of Pennsylvania, but was much reduced in fertility, and sadly out of order, by bad farming, continued during a series of years, and the last fourteen in the hands of yearly tenants, the last of whom paid one hundred dollars a year, and frequently claimed an abatement of that. The soil generally inclines to a yellow or reddish clay, with occasional stony ridges of sandy loam, the whole based upon a subsoil of impermeable red clay. In wet weather this soil becomes saturated with water, and during the winter and early spring, when mid-day thaws alternate with freezing nights, clover and other taprooted plants are thrown out of the ground, and generally perish.

The fences on this property were in a decayed state; not one good panel could be found, but briers, elder, sassafras, cherry, noxious weeds and stones, occupied both sides of every fence. On the ridges, red sand rocks, from the size of a stove to a bake-oven, were obstructions to farming, and in spots small stones were so numerous as to throw the plow out when in the best hands. Briers, garlic, St. Johnswort, yarrow, wild carrot, and every other noxious weed in this part of the country abounded in the fields; and to add to the evils of this bad system of farming, the water from the public road and the adjacent higher ground, ran through the dung yard, leaching the manure of its fertilizing principles, and carrying its best substance to waste in the nearest mill-dam, leaving fifty or sixty loads of light, strawy substance, to supply the exhaustion of the cropped soil. Ten bushels of wheat, twelve of rye, fifteen of corn, and one ton of rough field hay per acre, may be set down as its produce in a favorable season.

The experienced reader will believe this picture too highly colored until I mention one encouraging feature on this farm, which alone enabled its occupant to pay any rent at all. About eight acres formed a valley, through which ran a small but constant stream of water. Half a century ago artificial channels were dug at the proper level, along both sides of its banks, for this stream to flow in, enclosing about that quantity of ground, which could be watered at pleasure, and with due attention could be made to produce two tons or more of hay to the acre, making the most valuable kind of provender for milch cows.

On taking possession of this land, my partner aforementioned and I sat down to calculate the cost of making the necessary improvement to bring this land into a profitable condition. We borrowed five hundred dollars, and commenced working. We enlarged our garden to an ample size, and enclosed it with a good picket fence. I enlarged my hog pens to contain thirty or forty two horse loads of manure; had many loads of small stones hauled from the fields into the roads, and breaks made across the road, with inlets for the water into the sod fields, and open ditches or covered drains to carry the excess off; plowed the road down below the barn and filled up around the dung yard, so as to turn the water off the manure; next cleared the meadow of all obstructions of wood, stone, or unsightly heaps of earth, harrowed the surface with a sharp and loaded harrow, sowed timothy seed, opened the ditches on the sides and the middle of the meadow, and spread the water evenly over its surface; then moved the fences, grubbed the headlands; chopped level with the ground every tree not useful for fruit, shade or ornament; collected the bones of animals and oyster shells, and on heaps of briers or brush reduced them to cinders, applied this as a top dressing to poor spots of sward; applied thirty or forty bushels of fresh slaked lime to every acre of arable land, and about one-half has a second dressing of the same amount applied; have taken up, split, and carted to convenient places for building wall, every rock in the way of farming; have enclosed the land and divided the fields with substantial fencing, and planted about two hundred and fifty grafted fruit trees; and lastly, but not least in importance, I made during the last year upwards of two hundred two horse loads of good manure.

Now, what is the result in figures of this system of farming? Book farming, if you choose to call it so. Last summer fattened six steers on grass, (that I fed the previous winter on straw and corn fodder,) and sold them to the butcher in hay-making; fattened and sold forty-three sheep, one-third of them my own raising; sold one fresh cow, also my own raising; sold four hundred pounds of chickens, besides a lot of other poultry; sold seven barrels of vinegar; butchered four hundred and fifty pounds of corn fed beef, and one thousand nine hundred and fifty pounds of pork, also my own raising; sold fifty bushels of early potatoes, and sell about eight pounds of butter weekly the year round; raised one two year old and one three year old colt; made the last season, though a dry one, one ton and a half of clover and two tons of clear timothy hay to the acre, and raised twenty-bushels of wheat, thirty-eight bushels of oats, and thirty-three bushels of corn per acre, each.

In presenting this statement of improvement in exhausted land, I claim no particular merit; it has been done by application of the principles again and again laid down in your valuable paper; and I doubt not that in the hands of an experienced farmer greater improvement would have been made. Enough however is done, to justify me to present it to your readers, as proof of what may be done to renovate impoverished soil, and make it profitable. AGRICOLARIS.

Coventry, Chester co., Pa., Jan. 23, 1845.

MAMMOTH HOG.—Hiram Duell, of Hebron, N. Y., it is said has gone to Boston with a live hog, which is two and a half years old and weighs 1,548 pounds.

THE FIRE BLIGHT IN PEAR TREES, &c.

Mr. Editor—Some time since, I visited, in company with an agricultural friend, the delightful place and well cultivated farm and garden of Mr. **Jabez Jenkins**, of West Whiteland, Pa., and witnessed his mode of preventing the fire blight on his young pear trees, as also the cure of the cause, from whatever source proceeding, of the shedding of premature fruit. It was nothing more or less, than paving around each tree to a good distance, with stones, which he assured us he had hitherto found to answer the purpose, entertaining the idea that the remedy proceeded from the fact that the time of their blooming is thus very perceptibly retarded. Certain it is, at the time of which I speak, a good crop of very healthy fruit was found on every tree.

But my present purpose is, respectfully to request Mr. Jenkins to inform us through the medium of the Cultivator—which I presume he reads, for, judging from the order, neatness and regularity exhibited around him, he must be held obnoxious to the charge of being a book farmer, and then he takes the Cultivator as a matter of course—if the mode he had adopted for the purpose continues to afford him satisfaction, and if so, whether, reasoning from analogy, he would not expect the same course to work the same effect on the disease of the plum, as also that of the Morello cherry, the trees of which, in so many places, are afflicted with the rheumatic gout, and of consequence, subjected to the ravages of the curculio, according to the new doctrine which is gaining ground about it, that "living blight is the effect, and not a cause of disease." Remarking by the way, however, that this plan of paving around the trees, militates most strongly against the perpetual cultivating system, so long practiced by our large peach growers, for the express purpose of protecting their trees from the Yellows, &c.

I remember also, that the soiling of cattle in their stalls had claimed his attention; and the result was manifest in mountains of the richest manure, thrown up in the stable yards around. I recollect too, indistinctly I must confess, that he informed us, he had made some remarks respecting the crop of wheat, sown on land from which a crop of oats had been cut for soiling, which exhibited different appearances on spots that had been mown early, middling, and late, as also on that part where they had been permitted to remain until ripe, but whether they had been plowed in, or cut and taken to the barn, I cannot say; however that may be, I can promise your readers a very interesting account, if Mr. Jenkins will oblige us; and to those who know him, I need not add, that may be depended upon. Am I right in the idea, that the racks, out of which the cattle were soiled, had the staves placed horizontally instead of vertically, by which they were enabled to pull out long fodder with much greater ease, and without the waste attendant on the practice of feeding in troughs. As the system of soiling seems to be gaining ground in many places, Mr. Jenkins has it in his power to confer lasting obligations on numerous individuals, who are only desirous of knowing the ground upon which to commence operations, and their probable results, before starting, and although myself, not quite a stranger to the system, I should be glad to learn how the cattle are supplied in their stalls, after the crops, destined for their use, have become sufficiently high in growth to admit of a good bite, but not to allow of mowing, which must be delayed, else the productiveness of the crop is very much reduced. Where few cattle are kept, they might be tethered on the crops for a time, but on a sufficient scale to answer any good purpose, this plan would be found impracticable, and could not be denominated *soiling*. This, therefore, is a feature in the system that requires to be *brought out*; at the same time, I am prepared to find, that the addition to the manure heap and its superior quality, are sufficient to pay the extra expense incurred; particularly if the attendant knows how to compost the heap; and by pouring on the liquid contents of the cistern, built to receive it from the cattle, rendering it of more importance than the solid portions, according to late experiments, by which it was found, that one pint of urine from stalled cattle will produce an extra pound of wheat. *Chester Co., Pa.* M. P.

BERMUDA AND CRAB GRASS.

Editor of the Cultivator—I have read an article in the December number of the Cultivator, in which some grasses from Bermuda are compared with others from Mississippi. The botanical name of the Bermuda grass is *Cynodon dactylon*, or *Digitaria dactylon* of Elliott, who places it in the same genus with the crab grass (*Digitaria sanguinalis*) so troublesome to planters at the south, and to our northern gardeners. Elliott, in his Botany of South-Carolina and Georgia, remarks that although the crab grass is an annual, it is the best grass for hay at present known in our low country. The Bermuda grass is perennial, and is already widely diffused through the low country of the south. I have seen it frequently in south Alabama; have received specimens of it from Prof. Carpenter of Louisiana, and according to Elliott, it is common in the low country of South-Carolina and Georgia, particularly in loose soils.

Elliott says: "We have two varieties of this plant, one coarser (perhaps a species) growing in damp soils and native; the other said to be imported, a tender, delicate grass, growing over and binding the most arid and loose lands in our country, and apparently preferred by stock of all descriptions to every other grass. The cultivation of this grass on the poor and expensive sand-hills of our middle country, would probably convert them into sheep walks of great value; but it grows in every soil, and no grass on close rich land is more formidable to the cultivator; *it must therefore be introduced with caution.*"

The crab grass of Bermuda (*Rottboella dimidiata*) is rare in the southern States, and apparently confined to places in the vicinity of salt water. I never met with it but once, and then it was confined to a small spot forming a dense mat. This was opposite Pilatka on the St. Johns river in Florida. Yours truly,

Saml. B. Buckley.

West Dresden, Yates co., N. Y.

BLACK SEA WHEAT.

Mr. Tucker—This wheat is found to be so valuable a variety of spring grain in this and some other of the New-England States, that I am disposed to trouble you with another letter on the subject. It is evidently a very hardy grain, and not liable to suffer from the depredations of insects. It will grow and yield a fair crop, on almost every variety of soil, rich or poor; on very rich land it fills well, even where it is inclined to lodge.

It has been suggested that it would be profitable to introduce this wheat into those parts of Michigan and Illinois, where the winter variety suffers much damage, and yields poorly on account of the luxuriance in growth.

Most farmers here fail by letting this Black sea wheat stand too long. It produces less bran, and the bread is whiter and sweeter, where the crop is gathered in a greenish state. When allowed to stand upon the ground till perfectly ripe, there is a black mould, or substance, which frequently may be seen between the lobes on the belly of the grain.

I believe this grain was first shipped to Portland in the State of Maine, and it proved to be so valuable in that State, that the Kennebec County Agricultural Society have recently made two additional importations from the Black Sea, both of which have proved entire failures. In 1841, they had forwarded through the agency of Thomas Cordis of Boston, sixteen bushels. It was distributed, and sown by different individuals in that county, on various soils in the different locations, and in all cases it mildewed. Some was sown again with no better success in 1842. In that year, through the same agency, they procured about the same quantity, which proved to be the same variety, and they met with equal bad success. They were in hopes to have obtained some of the Siberian wheat in the last attempt, but were disappointed. I understand they are about to try again their success in another importation. We have proved by actual experiment, that not only this, but other kinds of winter and spring wheat will produce better to change the seed back and forth every year, from east to west, and from west to the east, between Maine and Michigan. I understand that Mr. Cordis has a nephew at Smyrna who is happy to confer favors on such as are striving to improve the agriculture of the country.

I sowed this season on about two acres, near 3 bushels of seed, from which we harvested 71½ bushels of plump wheat. I took to Sprague's mill in this town, some of this Black Sea wheat, which was cleaned in "Bailey & Rich's Smut Mill," (which, by the way, has proved to be the best machine to clean *damp grain*, that has ever been introduced among us.) There carefully measured in a sealed measure, seven bushels, which weighed on the scales, 478 lbs. and 3 ounces, which is 68 lbs. 5 ounces to the bushel, after it was manufactured into flour. The yield was 360 lbs. 8 ounces, or 51 lbs. 7 ounces of flour to the bushel, and 14 lbs. and 10 ounces of bran and middlings—waste, 2 lbs. 5 ounces. To every 60 pounds of wheat, the produce is 45 pounds of flour.

There appears to be two kinds cultivated here, the white and red chaff. The heads of both varieties are guarded by a stout and long beard. The red chaff is generally preferred to the white. The berry of this wheat is large and of a dark color, very hard, and not subject to shed in the gathering; it requires a threshing machine to beat out the grain; it also requires more moisture to swell the berry, and is not as liable to grow by standing out in the field as any other kind cultivated here.

Weybridge, Vt., Jan. 31, 1845. S. W. Jewett.

SQUASHES—POULTRY.

L. Tucker, Esq.—Having received a number of letters of inquiry respecting some statements in an article of mine in the Cultivator for October last, I take the liberty of answering some of them through your paper.

1. The Valparaiso Squash.—I am not aware of any peculiar difficulty in raising them. They require a warm, rich soil, a good exposure to the sun, and an ample space for the vines. They should also be planted early, so as to have the benefit of the whole season. At the State Cattle Show and Fair at Poughkeepsie last fall, I saw a number of varieties of this squash, some grey, some yellow, &c., but generally of an oblong shape, and the largest was said to weigh 200 lbs. and another 152 lbs. The seeds can doubtless be procured at the principal seed stores through the country.

The Cuba pumpkins, of which eighteen, as the product of one seed, and weighing 776½ lbs. were exhibited at the fair, appeared to have many qualities to recommend them to the farmers; but when told that they were sold for nothing less than twelve and a half cents per seed, I concluded to forego the pleasure of trying them for the present.

2. The Price of pure Poland and Dorking Fowls.—When cooped and sent away, the price is $1.50 per pair, or five for $3; and letters on the subject should be post paid.

3. Crested Fowls.—From extensive observation and inquiry, I am led to believe that the Poland is the only original variety of crested fowls, and that all others are a cross between this and the common varieties. Of these cross breeds I saw several lots last fall in Fulton market, New-York, which were sold at high prices under the name of *French pheasants.*

4. How long will Eggs keep so as to produce Chickens?—I have made no experiments to ascertain this, but believe if they should be put in salt immediately after being laid, and kept from the air and frost, that chickens might be hatched from them at least a year afterwards. Eggs laid in Europe have been brought to this country and hatched; and if some one will procure and send me some of Victoria's mahogany colored eggs from her China fowls, I will engage to try the experiment again.

5. How did you ascertain that a Hen, changed to a new Cock, would continue for four or five weeks to produce eggs impregnated by the former one?—Finding nothing in any poultry book in relation to this matter, I substituted a white cock for a black one, and then by marking and hatching all the eggs a hen produced in six weeks, and repeating the experiment a number of times, I came to the conclusion that the time was between four and five weeks. Other experiments have convinced me that the notion entertained by some, that a cock running with a lot of hens for a few days will impregnate their eggs for a whole season, is without any foundation in fact.

6. Poultry House.—A Mr. Lyman has recently begun an experiment near this city, of keeping fowls on a large scale. He has erected a poultry house seventy-two feet long, twelve feet wide and fourteen feet high, divided into upper and lower rooms the whole length. At one end is a room for various conveniences of the owner, and over it a room for storing grain. The rest of the building in the upper story is fitted up exclusively with roosting perches for the fowls, and the room below it, connected by a flight of stairs, is fitted out with numerous feeding hoppers and tiers of boxes to lay in, &c. A door from this room opens into a yard of some half an acre, enclosed with paling eight feet high. Mr. L. has already 1,200 fowls in his establishment, and is seeking to increase the number to 2,000. He intends to keep an accurate account of debtor and credit, and will be able to show in a year or two something of the profits of such an enterprize. May we not hope that, what a king of France wished in regard to his subjects—a fowl in every one's pot—may be soon enjoyed by every family among us.

Buffalo, February, 1845. H. A. Parsons.

FARMING EXPERIENCE.

Mr. Editor—In farming, as well as in other operations, mere theory and speculation is worth but little; *practical experience* is what is wanted to uphold the business. The results of experience in farm management, are what farmers want to read and study. Every farmer has a system of management, which to his own mind seems most correct. It may be the system practiced by his father, of increasing to the greatest possible extent, his number of acres. Now I would never leave the old way for a new one, so long as it was certain that the old way was the best, nor would I follow the old track for the reason that it was old, when convinced, after careful examination, that a new one was to be preferred.

Reading agricultural papers, may perhaps be said to constitute the first step towards improvement. This reading gives an opportunity of becoming acquainted with the practical experience of farmers. It is much to be desired that more of this class of farmers could be induced to give their views. There is too frequently a reluctance to writing. This reluctance should be overcome. It is not to be expected that plain farmers should always frame sentences in the style of *literary* writers, nor is this necessary—give us the *facts* in an intelligible manner. Any man that can give his ideas to his neighbor in conversation, can do this, and this is all that is necessary. L. Durand.

Derby, Ct., Jan. 1845.

Fattening Cattle.—It is not often that the "*reductio ad absurdum*" is used as a mode of demonstration in agriculture. So good an example has occurred to me that I cannot but offer it. I had directed my manager, a young and inexperienced man, to fatten three or four steers, while kept up, instead of permitting them to run at large with the rest, (bad management, too; I hope to adopt shortly the soiling system.) "What are these?" I exclaimed in astonishment, at seeing the lean and ill-favored kine. They had been placed on the *north* side of a shelter, were fully exposed to wind and rain, and were up to their knees in mud, which the overseer hoped to make dry and comfortable by drawing in leaves, straw, &c. !!!—and hoped to fatten them by furnishing abundance of corn!!! Enough had been wasted on them to have fatted a herd, while he could not conceive why they remained so poor! "Turn them out," said I, "till we can put up more houses." The situation had been selected for convenience of watering. S.

Milk.—It is estimated that 2,000,000 quarts of milk are annually consumed at Rochester, which, at four cents per quart, would amount to $80,000.

PHOSPHATE OF LIME—PEAT FOR MANURE.

In the August number of the Cultivator I gave you a few hasty notes upon the subject of Phosphate of Lime, in reply to the inquiries of "*A Practical Farmer*," of Staten Island. Although it is doubtless true, as there stated, that there are no localities yet known in the state, where this mineral exists in sufficient quantity for agricultural purposes, yet I indicated its existence under circumstances which doubtless yield an unfailing supply.

Since the phosphates are known to form an essential part of cultivated grains, and this supply coming from no other source than the soil and what is derived from it, it follows that these substances exist there. Now there is no other source for its occurrence in soils, but from the decomposition of rock, for it is fully acknowledged that all soils are derived from this source. The phosphates must exist then, in the rocks originally, either visible to the eye, or so combined as to be invisible. I alluded to the analyses of coral, made by Mr. Silliman, Jr., proving the existence of phospates in all cases. Now it is well known that nearly all our limestones contain corals, and some of them are almost entirely composed of the broken and comminuted skeletons of these zoophytes; consequently the phosphates must be as widely diffused as our calcareous rocks, and equally a consequence is the limit of the wheat growing region.

I make these remarks incidentally, as showing the wide diffusion of a mineral substance essential in grain growing soils. Now it is one of the most important objects to the future agriculture of the state, that a full analysis be made of all the calcareous rocks of the state, both limestones and shales. And not only should an analysis of these be made from single specimens, but of specimens from numerous and distant localities in the same rock, so that its value in this particular may be known throughout its range. This is equally essential with an analysis of the soils, the marls and muck, and every agriculturist should endeavor to facilitate an object so much to be desired. The present generation may not require this knowledge to enable them to raise bread, but others are coming upon the stage, and every advance made by us enables them to advance still another step. Therefore as a foundation for agriculture, the rocks, and especially the calcareous rocks which are every where loaded with corals, shells and other organic remains, should receive a thorough chemical examination.

I have been led into these remarks incidentally from perceiving the attention which is now being given to natural fertilizers of all descriptions. The facts here stated may perhaps offer an explanation of the variable effects, as stated, of lime. In some instances the use of this substance is said to produce no beneficial effects upon soils, while in others its effects are acknowledged to be important and beneficial. Might it not be worth while to ascertain whether lime from the same rock or same locality, is uniform in its effects? And also in other cases, where no benefit is derived, may it not be desirable to inquire if the limestone originally contained corals and other organic remains? Perhaps the presence or absence of these may exert an influence not appreciated. This subject is of high interest to agricultural chemists, and may perhaps have received attention, though I am not aware of it.

That some limestones are, or at least appear to be, destitute of organic matter is true. All our crystalline limestones are apparently destitute of organic matter, but in most cases of this kind they have been obliterated by the process of metamorphism, or the change by heat from an ordinary sedimentary to a crystalline one. Many of these limestones contain crystals of phosphate of lime, and these are doubtless derived from corals or other organic matter in the rock, and segregated and crystallized by the same process which resolved the whole mass crystalline.

The inquiries to be made, therefore, respecting limestones are, whether they contain organic matter—whether crystalline or not, and if so, whether containing phosphate of lime disseminated. The effect of the different limes, and analyses of the original rock, would be a subject of agricultural interest and importance.

This fruitful subject of theory and investigation has led me into a longer digression than I intended, and I perceive plainly that with a few more facts and experiments, an interesting paper could be made. This however is not my design, being engaged in other pressing avocations, though still feeling an interest in agricultural subjects; which interest induced me, in the earlier annual reports to give some space to the subject. I should have done more, but I fancied they received little attention, and therefore in the Final Report, instead of gathering the whole matter into a chapter, left it for the agricultural surveyor.

My attention, as before remarked, was called to the subject by the inquiries of a "Practical Farmer" of Staten Island, and I perceive the same gentleman has addressed to me a communication, in the November number of the Cultivator, relating to muck or peat.

In the annual reports of the Geologists of the state, numerous localities, and almost inexhaustible supplies of this substance were given; but in a few instances only had application been made of its properties as a fertilizer. One example of this kind, which now occurs to me I will briefly notice. Mr. Merry, of Wheatland, Monroe county, whose farm embraced part of a large marl and muck swamp, drained a small portion near the margin, and seeded it with Timothy, sometime in June if I recollect aright. He cut three and a half tons to the acre. About three fourths of an acre of the same gronnd was sowed with onion's, and the produce was 400 bushels.

But to test the virtues of this material as manure, a compost of muck and marl was made with some stable manure, and thus applied to a heavy soil which produced but poor crops. The effect was a large crop of wheat in a season when much of the country around produced but very small crops. The same field, when I saw it, was just cleared of a crop of corn of between 50 and 60 bushels to the acre, while an adjoining field, where the soil was in its natural state, produced only 15 bushels! Such were the effects of a compost of marl and muck; and not only were the crops thus improved, but from a stiff clay soil it had become friable and pulvurulent, thus saving a great amount of labor in cultivation.

But it is not necessary to quote examples of this kind. Your correspondent of Staten Island, has shown full well the beneficial results of the use of muck, and I apprehend if used with a little lime, even more benefit might result.* At least it would hasten the decomposition of vegetable fibre, neutralize any acids that might exist, and decompose sulphate of iron which is often present in muck.

We will now proceed to mention some of the more important localities of this substance in the state; premising that from north to south, and east to west, there appears to be an inexhaustible supply. The localities cited are from the Annual Geological Reports, and numerous others doubtless exist, which from circumstances beyond control, could not be examined or even known to the Geologists.

In the First Geological District, Mr. Mather remarks that peat is so abundant that it would be superfluous to mention localities, and that it occurs on nearly every square mile, and in almost every marsh. In his first report, Mr. Mather gives no localities, but in the second he enumerates a large number in the counties of Queens, Kings, Richmond, Columbia and Dutchess. In these counties about 50 localities are enumerated, which is doubtless but a small proportion of the whole. The aggregate amount of peat estimated to be contained in these marshes at that time, was 3,000,000 cords. This estimate was for peat as fuel, and there would probably be nearly as much more which would be equally good for manure.

The principal localities enumerated are Kinderhook pond containing 60 or 70 acres. The marshes and shallows of Kinderhook. A marsh of 6 acres three miles north of Kinderhook, and another similar one in the north part of Stuyvesant. A marsh of 30 acres one mile southwest of Kinderhook. Two or three localities are mentioned in New Lebanon, one of 15 and another of 30 acres. In the township of Canaan alone, Mr. M. estimates 400,000 cords of peat. There is a small marsh near Upper Red Hook, and several between Fishkill and Hopewell, containing altogether about 40 acres, and estimated to contain 40,000 cords of peat. Another marsh extending north from Long pond is estimated to contain 300,000 cords of peat. Marshes of from two or three to ten or fifteen acres, occur in the towns of Ghent, Malden, Hillsdale and other places. In the town of Amenia there is an extensive bog containing about 150 acres, and estimated to contain 150,000 cords of peat. Others in the town of Dover contain above 75,000 cords. There are also several peat bogs northeast of Dover, near Elbow mountain, one containing 40 and another 60 acres. Large quantities of peat occur near Pine Plains, in Copake and Taghkanic. The marsh in the valley of Stessing pond is estimated to contain 500,000 cords.

A marsh three miles east of Poughkeepsie is estimated to contain 130,000 cords, also several near Union Corners, one containing 60,000 and another 90,000 cords, and in Staford one about 60,000 cords.

Numerous other localities of this material are enumerated in the same region of country, but it does not appear necessary to swell the detail in this communication. The immense amount of this extremely valuable substance in these counties should be sufficient to direct the attention of farmers to the subject. Here is presented an almost inexhaustible supply of natural manure, and a product too, which in all swamps and waste low lands is constantly accumulating. In a few localities only has any attention been given to these deposits of peat or muck, and in still fewer have persevering trials been made of its application to and effects upon crops. To some crops it is doubtless more applicable than to others, but either alone or in combination with other substances it is unquestionably of great importance to all crops. Carbonaceous matter is of the first importance in soils, and the condition of this material is peculiarly favorable to the absorption of moisture and gases, and mechanically fitted to loosen and render friable the closest soils.

In a future number we shall give some farther notice of localities of this substance, with some remarks upon its uses.

Albany, February, 1845. JAMES HALL.

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* Perhaps I might here introduce as a note the mode of making manure on sugar and coffee plantations of the West Indies, as detailed to me by a gentleman of Barbadoes. Vegetable matter of all kinds, leaves, grass, twigs the refuse of cane, and in fact every thing of vegetable matter with stems not larger than one's little finger, is gathered together; a pit is made of sufficient depth, a layer of the vegetable matter thrown on, then a layer of lime, and again of vegetable matter and so on until the pit is filled. The place is then enclosed, and cattle yarded there for six months, when the whole will be found in a state of decomposition, and fit for removal. This is one of the best manures. What a lesson to those farmers who burn their wheat straw in view of limekilns, and suffer tons of leaves, weeds and other vegetable matter to decay upon the surface, "wasting its sweetness upon the desert air," instead of yielding it to the crop of the succeeding year. How many thousand tons of manure could be made in this way annually in New-York, and as a consequence how many thousand dollars would *actually* be added to her wealth?

Foreign Correspondence.

MR. NORTON'S LETTERS—No. VIII.

Lab. of Ag. Chemistry Association,
Edinburgh, Dec. 31, 1844.

L. Tucker, Esq.—In my last letter, I alluded to some rather remarkable improvements of peat moss, that I had seen upon the estate of Mr. Fleming of Barochan, near Paisley, in Renfrewshire. These improvements are as yet but of small extent, embracing by far the least portion of a moss of about 150 acres. It seemed to me however, that they had been both skillfully and economically conducted, and I will endeavor to give some account of the method pursued.

A large part of the land now under cultivation, has been reclaimed by a tenant named Weddle, a fine specimen of a hard working, shrewd, practical man, making up for the want of means, by industry and foresight. His house stands where the peat was once 20 feet in thickness, and at the distance of a few hundred yards in front, where the improvements terminate, it yet rises, a perpendicular wall of about 12 feet. He is allowed the privilege of cutting as much of it for sale as he chooses, and all spare time is employed in this business, so that nearly an acre of ground was dotted with large stacks, piled up in such a way as to be thoroughly exposed to the sun and wind.

The chief difficulty in improving peat moss is to obtain a good soil on the surface of the peat. In this case, the clay lying immediately underneath, is of excellent quality, and yields good crops when it can be brought to the surface; but bringing it up from beneath 10 feet and upwards of solid peat, is of course not to be thought of. Many plans have been proposed for reducing the thickness of such immense masses; a proprietor a few miles from Barochan, is pursuing a method which has found favor in other parts of Scotland. He has erected a steam engine, which pumps a large quantity of water from an adjoining river, into a sloping canal, the mouth of which is opened at intervals, and masses of peat thrown into it, are swept by the current into the river, and finally to the sea. This method is painfully slow, and the capital required, forbids its employment by any but the wealthy.

Mr. Weddle's plan is far simpler and more economical. After the peat is dug away for sale to within from 2¼ to 4 feet of the underlying clay, he makes the surface into conical piles, each containing some dry peat in the center; when the preparations are complete, the dry portion in the center is kindled and causes, before it expires, a slow combustion of the surrounding mass; when fairly started, it is only necessary to throw on from time to time, the wet peat dug up around each heap. In this way several feet in depth *may* be burned away in a season, with comparatively little expense. But this is not the only advantage. Peat, as it is a product of vegetable life, contains the substances necessary to sustain that life. In the state of peat, however, various organic acids are present in injurious excess, and it is otherwise not in a condition to readily give up its valuable constituents as plants require them; but when burned, noxious ingredients are driven off, and the ash which remains, is a valuable manure, so much so, that it is largely imported from Holland under the name of Dutch ashes.

When the thickness of the peat is considered sufficiently reduced, the whole is thoroughly trenched, and a foot of the subjacent clay brought up and spread upon the surface. This clay, in itself good, is further improved by mixing with the ashes resulting from the burned peat, and the two together, form a soil scarcely to be surpassed. Each field is well drained at the same time that the trenching is performed.

It is obvious, that even with the exercise of the most rigid economy, the redeeming of this land must be expensive. We were favored with a statement of all the various expenses incurred in subduing an area of one and a half Scotch acres; the Scotch acre is about one-fourth more than the English imperial acre. Draining, trenching three and a half feet and bringing up 12 inches of clay, cost for the whole, £42, or $200. A heavy dressing of manure and 6 tons of lime to the acre, together with the operation of wheeling on by barrows, the ground being still soft, cost $270 more, making £97, or about $470, before a crop.

The first crop was potatoes, and the sale realized £54, from this deduct £9 for seed and working, and £2 7s. for rent, there remains as clear profit £42 15. 2. Oat crop, 108 bushels, brought £15 10s. deduct for seed and labor, £3 and £2 5s. for rent, leaves £8 5s. 3. Oat crop, larger in quantity than the previous year, but the price lower, being £8 8s.; deduct as before £5 5s. for seed, labor, and rent and £2 additional for grass seed, leaves only £1 8s. 4. Grass being the present year, two cuttings, worth £12, from which deduct rent, and £9 15s. are left. He has thus from four crops, made £62 3s., from which must still be deducted interest, and there remains £49 15s., or $240, being $60 a year, or more than 12 per cent per annum, or the original capital.

I have been thus particular in giving these statistics, because I think they show in a striking light, that *judicious* enterprise, is sure to be profitable, and because they may incite some of our *proprietors*, who complain that they cannot afford to improve their land. What a small *tenant* farmer, with small capital, can do, may at least be equaled by a *proprietor*, with even less means.

I have said that the peat ash, containing the substance of dead plants, is therefore fitted for the food of living ones. This is beautifully illustrated, as by chemical research, many practical points are here, under my eyes daily, by an analysis of the ash of two different layers of peat, analyzed lately under the direction of Prof. Johnston, the results of which I am permitted to insert in contrast with an analysis of Dutch ashes, also made here.

	White Peat Ashes.	Black Peat Ashes from Barochan.	Dutch ashes.
Organic matter (charred turf,)	54.12 pr ct.	3.02 pr ct.	25.77 pr ct.
Sul. and carb. of potash & soda,	6.57	5.16	2.78
Alumina, - - - - - - - -	2.99	2.48	11.19
Sulphate of lime, (gypsum,) -	10.49	21.23	16.35
Carbonate of lime, - - - -	8.54	3.50	1.21
Oxide of iron, - - - - - -	4.61	18.66	trace.
Oxide of manganese & magnesia,			3.39
Phosphate of lime, - - - -	0.90	0.40	1.24
Siliceous matter, - - - - -	10.88	43.91	37.24
	99.10	98.36	99.17

With a few observations on these analyses, I will close. It will be perceived that the ash of the White Peat, was very imperfectly burned, more than half of its weight consisting of unburned organic matter; it is therefore necessary to double the weight of its other constituents in order to compare it with the Black Peat from the same moss. Compared with the Black Peat, it is especially rich in phosphates, as doubling the per centage, makes them 1.80 per cent or nearly 2 lbs. in 100. The White Peat is the upper layer of the moss, and therefore consists of newer plants. A striking feature of these ashes, is the quantity of sulphate of lime, (gypsum or plaster) which they contain, amounting in the two first, to fully one-fifth of the whole weight. The sulphate and carbonate of potash, too, is worthy of special notice as a very important ingredient. On the whole, we have in the two first about 40, and in the third, about 20 lbs. in 100, of substances necessary to our cultivated crops, and even indispensable. I think that the mere presentation of such facts, obviates the necessity of any further argument, and I am quite confident, that those of oor farmers who consider the matter, will never again waste so valuable a portion of their possessions. I am, yours truly,

John P. Norton.

MR. MITCHELL'S LETTERS—NO. III.

Liverpool, 20th December, 1845.

Luther Tucker, Esq.—Do not expect too much of these letters. All I hope is to give your readers the advantage of my own observation, which, though limited, it will be my aim to make discriminating and practical. I cannot hope to possess the advantage of communication with high authorities which some enjoy—still, I mean to keep my eyes all the while open, and shall not let placards or "spring guns," or fears of apprehension, deter me from occasional rambles through the grounds of gentlemen farmers; nay, shall even presume, with yankee impudence, (when I visit his lordship's estate,) to question, *sotto voce*, Earl Spencer's chief steward or under gardener.

The grass in the fields is still green, and cattle, fattened for Christmas, still feeding upon the herbage, with only an occasional lock of hay. The frosts, for this climate, have been very severe, yet there has been no snow. The farmers hereabouts have now little to do. Some are carting manure from town, or heaping it in their yards, or scraping refuse leaves and dirt from the road side. Others are taking the dead wood from hedges, repairing their farm buildings and implements, or possibly breaking in young horses. Great numbers of them have been attracted by the fat cattle shows in various counties, which as usual preceded the Christmas holidays. That of the Smithfield Club is worthy of special mention, as having been visited by thousands, as well as by the Queen, Prince Albert, &c. There were on show 100 head of cattle, 300 of sheep. A very large polled Angus ox of Prince Albert's, was particularly remarked. You will find full accounts in the Mark-Lane Express.

At the Christmas *market*, were exhibited, of beasts 5,713, of sheep 36,970, being an increase over last year's show of 1,000 in cattle, and over 10,000 in sheep. The comparative prices of the two years range thus, per quarter of eight pounds:

	1843.	1844.
Beef,	3s. 8d. to 4s. 4d.	2s. 10d. to 4s. 6d.
Mutton,	2s. 8d. to 4s. 4d.	2s. 10d. to 4s. 4d.
Veal,	3s. 4d. to 4s. 6d.	3s. 4d. to 4s. 4d.
Pork,	3s. to 4s.	3s. to 4s.

Notwithstanding the amazing quantity of meats which are so temptingly displayed in all the city stalls at this holiday time, yet there are many poor fellows who have to rest satisfied with the sight only. Before my eyes every day a dozen cabmen, who stand exposed to all weathers, eat their two meals upon the stand, consisting, in no instance, of more than four slices of barley bread and a cup of coffee. The most efficient workmen can be hired for 1s. and 9d. (38 cents) a day, finding themselves. And the cases are almost numberless of a cabman being obliged to support a wife and two or three children upon wages of seven shillings a week, out of which he has to pay two or three shillings rent! Do some of your readers want to emigrate, where they may find so cheap labor? Hear the other side of the story first. If you hire land you will have to pay from £3 to £8 the acre, and in most instances the taxes beside, which are enormous; moreover, the purchase of implements, &c. (at English prices) would require an investment sufficient to buy and enclose a hundred acres in Illinois. If actual purchase is considered, let me suggest that it would be hard to buy land at a price to live by, from those who are content to hold it while paying them but two per cent under high improvement. It requires no long residence here to discover that money is a cheaper commodity than with you, but while cheap, confined to comparatively a few, and those few the landholders.

The St. Johns' market—the largest in the world—makes a grand show as Christmas approaches. The dressing of the meats, and their fatness, in themselves a show, to say nothing of the immense displays of every variety of fruit and vegetable, and flowers and evergreens, stretching down the three hundred and fifty yards of tabling, and the fanciful festoons and holly branches, and boughs of the mistletoe, hung over every stall, and the thousands thronging the stone pave from eight in the morning till eleven at night. The rents of St. Johns' market, the last year, amounted to 6,578 pounds. It covers an area of 8,235 square yards, with roof supported by one hundred and sixteen cast iron pillars twenty-five feet high. There are besides, in Liverpool, three other markets for the sale of meats, covering nearly an acre of ground each; in addition to which are the fish market, the pedlar's market, the pig market, the hay market, and the cattle market. Venders of butter and poultry in many cases bring their produce directly from the country to the doors of their customers, in a bit of a rough cart, drawn by as rough a donkey. The Irish butter comes in tubs, with the several balls rolled in muslin; some of it is very nice, selling from 10d. to 14d. at retail. The best English fresh made butter fetches 14d. to 18d., being now unusually high. An importer told me a day or two since, that a lot on hand would turn thirty per cent over the invoice price to the shipper. This was from the Canadas, though United States butter, the duty on that imported direct being very great. This reminds me that a corrected scale of the British tariff on American agricultural produce will be acceptable to many of your readers. I therefore append one, which I have submitted to inspection at the custom's rooms, and is pronounced correct. The sliding scale of duties on bread stuffs, I omit. Price of wheat the past week, has averaged 45s. a quarter—duty 20s.; that being the duty whenever the price is under 51s. a quarter. Of this sliding scale, the advantages and disadvantages, its advocates and opponents, I will speak more fully in a future communication.

British Tariff.

	From For'n Countries.	*From British Prov's.*
Apples, raw, bush	$0 11	$0 04
Apples, dried, bush	46	46
Bacon and hams, cwt.	8 22	80
Beef, cwt.	2 04	46
Butter, cwt.	4 75	1 15
Cheese, cwt.	2 41	57
Cranberries, gall.	2	2
Fruit, £100 value,	23 75	23 75
Hay, load,	3 68	1 84
Lard, cwt.	46	11
Pork, cwt.	1 84	46
Tallow, cwt.	72	6
Teasles, 1000,	6	6

In my next I will give you the prices of all marketable produce as retailed in the market houses.

Till then, yours, &c.

D. Y. Mitchell.

FOREIGN ITEMS.

Tiles for Draining.—Cottam and Hallen exhibited a new drain tile machine, at the late Smithfield show, said to be capable of making 10,000 tiles per day.

A new kind of Roofing is coming into use in England. It is called the Patent Asphaltefelt. Its cost is one penny per square foot. The felt being impervious to rain, frost and snow, and a non-conductor of heat, makes a warm and durable covering, and from its lightness, economy and portability, is particularly well suited for cattle and sheep sheds, and other out buildings.

Death of Fellenberg.—The celebrated M. Fellenberg, founder of the agricultural school at Hofwyll, in Switzerland, died on the 21st of November last.

Allotments.—The average acreable products under the allotment system in England, for 1842, are said to have been as follows: Potatoes 413 bushels, wheat 43¾ bushels, barley 53¼ bushels, peas 45 bushels, beans 56¾ bushels.

☞ It appears that the quantity of wheat imported into Canada from the United States, from the 11th of October, 1843, to the 5th of July last, (to which day the returns received only extend,) was by sea 634 quarters, and by inland navigation or land carriage 21,161 quarters.

RAISING EARLY CUCUMBERS.

H. G. Dickerson, of Lyons, Wayne county, N. Y. one of the most successful cultivators of garden vegetables, adopts the following mode of raising early cucumbers. He makes his hot-bed at the usual time, and when the soil is placed upon the stack of manure, pieces of turf are placed just below the surface, on which the seed are planted. If the grass of this turf is alive, it is to be put upside downwards. On the arrival of warm weather, and when the soil in the open air becomes fit for cultivation, these pieces of turf are removed entire, with the young plants upon them, and placed in highly manured ground where they are finally to grow. In this way the roots are taken up without the least mutilation, consequently no check is given to their growth. Afterwards, whenever there is any probability of a night frost, each hill is covered with a bell glass. These glasses have a small opening at top, which prevents the sun scorching the plants in case they are not removed in time; they are obtained at the glass-works in the neighborhood, for four cents a piece; but where they cannot be had, boxes with panes inserted, will answer nearly as well.

By this means, cucumbers fit for the table, were raised the past season, by the first of sixth month, (June.)

New-York State Agricultural Society.

Cattle Show and Fair for 1845, *to be held at Utica, Sept.* 16, 17 *and* 18.

PREMIUM LIST FOR 1845.

ON FARMS.

For the best cultivated farm, of not less than 50 acres, exclusive of woodland, regard being had to the quantity of produce, the manner and expense of cultivation, and the actual profits:

First Premium,............ $50 | Second do................. $30
Third do.................. $20

The persons making application for these premiums, must submit written answers to a series of questions which will hereafter be published.

ON ESSAYS.

For the best series of Essays on the importance of scientific knowledge in prosecuting successfully the ordinary pursuits of Agriculture,..................................	$100
For the best Agricultural Text Book for Schools,............	100
For the best Text Book on Horticulture,.....................	50
For the best essay on Subsoil Plowing, with the results of actual experiments in the State of New-York,..............	20
For the best essay on Draining, with details of the results of actual experiments, showing the expense and supposed increased value of the land,..............................	10
For the best essay on Irrigation,..........................	10
For the best essay on the Culture and Manufacture of Silk,...	20
For the best essay on the prevalent Disease in Potatoes,......	20

CATTLE.

CLASS I.—Durhams.

Best Bull, over 3 years old, $15 | Second best,.............. $10
Third best, Diploma.
Best Bull, 2 years old,...... $10 | Second best,....Colman's Tour.
Third best, Diploma.
Best yearling bull,......... $10 | Second best,....Colman's Tour.
Third best, Diploma.
Best bull calf,...Colman's Tour. | Second best,..........Diploma.
Best cow, over 3 years old, $15 | Second best,.............. $10
Third best, Diploma.
Best heifer, 2 years old,.... $10 | Second best,....Colman's Tour.
Third best, Diploma.
Best yearling heifer,....... $10 | Second best,....Colman's Tour.
Third best, Diploma.
Best heifer calf, .Colman's Tour. | Second best,..........Diploma.

CLASS II.—Herefords.

Best bull, over 3 years old,	$15	Best cow,..................	$15
Second best,...............	10	Second best,...............	10
Best bull, between 1 and 3 years old,...............	10	Best heifer, between 1 and 3 3 years old,.............	10
Second best,..........	Diploma.	Second best,..........	Diploma.

CLASS III.—Devons.

Best bull, 3 years old,......	$15	Best cow,.................	$15
Second best,...............	10	Second best,..............	10
Best bull, between 1 and 3 years old,...............	10	Best heifer, between 1 and 3 years old,...............	10
Second best,..........	Diploma.	Second best,..........	Diploma.

CLASS IV.—Ayrshires.

Best bull, over 3 years old,.	$15	Best cow,.................	$15
Second best,...............	10	Second best,...............	10
Best bull, between 1 and 3 years old,...............	10	Best heifer, between 1 and 3 years old,...............	10
Second best,..........	Diploma.	Second best,..........	Diploma.

CLASS V.—Crosses of Native and Improved.

Best cow, over 3 years old,.	$15	Best heifer, 2 years old,....	$15
Second best,...............	10	Second best,...............	10
Third best,..........	vol. Trans.	Third best,..........	vol. Trans.

CLASS VI.—Native Cattle.

Best cow, over 3 years old,.	$15	Best heifer, 2 years old,....	$15
Second best,...............	10	Second best,...............	10
Third best,..........	vol. Trans.	Third best,..........	vol. Trans.

WORKING OXEN.

Best team of 20 yoke from any one county,.........	$25	Best 10 yoke of oxen from any one town,...........	$20
Second best,...............	15	Second best,..............	10
Best yoke of oxen,.........	15	Third best,.....	Colman's Tour.
Second best,...............	10		
Third best,..........	vol. Trans.		

In awarding the premiums on working oxen, the single teams will be subjected to a trial on a loaded cart or wagon, under the direction of the committee; and particular reference will be had to the matching, training and docility of the animals, as well as their general appearance.

THREE YEAR OLD STEERS.

Best yoke,................ $15 | Second best,.............. $10
Third best, Diploma.

TWO-YEAR-OLD STEERS.

Best yoke,................ $10 | Second best,....Colman's Tour.
Third best, vol. Trans.

YEARLING STEERS.

Best yoke,................ $8 | Second best,....Colman's Tour
Third best, vol. Trans.

FAT CATTLE.

Best pair fat oxen,......... $15 | Second best,.............. $10
Third best, Colman's Tour.
Best ox, cow, or heifer,.... $10 | Second best,................ $5
Third best, vol. Trans.

A fat ox taking a premium as one of a pair, cannot compete singly for another premium.

HORSES.

Best stallion, 4 years old,...	$20	Third best,............	Diploma.
Second best,...............	10	Best gelding horse,........	$10
Third best,..........	vol. Trans.	Second best,........	vol. Trans
Fourth best,...........	Diploma.	Best breeding mare,........	$20
Best stallion, 3 years old,...	$15	Second best,..............	10
Second best,...............	10	Third best,............	Diploma.
Third best,............	Diploma.	Best mare, 3 years old,....	$10
Best pair matched horses,..	$10	Second best,........	vol. Trans.
Second best,......	2 vols. Trans.	Third best,............	Diploma.

The variety of horses which possesses size, strength and endurance for field labor, combined with that action which qualifies them for the carriage or saddle—in short, the "horse of all work"—is probably the most profitable class which our farmers can now engage in rearing; and to such, therefore, will the preference of the society be given. Horses taking premiums in pairs, cannot compete singly for the premium for geldings.

SHEEP.

CLASS I.—Long Wooled.

Best buck,................	$10	Best five ewes,............	$10
Second best,....	Colman's Tour.	Second best,....	Colman's Tour.
Third best,............	Diploma.	Third best,............	Diploma.

Best pen 5 lambs, $5.

CLASS II.—Middle Wooled.

Best buck,................	$10	Best five ewes,............	$10
Second best,....	Colman's Tour.	Second best,....	Colman's Tour.
Third best,............	Diploma.	Third best,............	Diploma.

Best pen 5 lambs, $5.

CLASS III.—Merinoes and their Grades.

Best buck,................	$10	Best five ewes,............	$10
Second best,....	Colman's Tour.	Second best,....	Colman's Tour.
Third best,............	Diploma	Third best,............	Diploma.

Best pen 5 lambs, $5.

CLASS IV.—Saxons and their Grades.

Best buck,................	$10	Best five ewes,............	$10
Second best,....	Colman's Tour.	Second best,....	Colman's Tour.
Third best,............	Diploma.	Third best,............	Diploma.

Best pen five lambs, $5.

Class I, is designed to include the Leicesters, Lincolns, Cotswolds, and all the varieties of sheep which furnish the quality of wool suitable for combing—Class II, includes the South-Down, Norfolk, Dorset, Native, &c.—and Classes III and IV, all those generally denominated Merinoes and Saxons, whether of pure or mixed bloods.

CLASS V.—Fat Sheep.

Best,...................... $10 | Second best,....Colman's Tour.
Third best, vol. Trans.

Applicants for the premiums on fat cattle and sheep, must furnish statements of the manner of feeding the animals, and the kind, quantity and cost of the food.

SWINE.

Best boar, over 10 months,.	$10	Best sow,.................	$10
Second best,....	Colman's Tour.	Second best,....	Colman's Tour.
Third best,............	Diploma.	Third best,............	Diploma.

Best lot of pigs under 10 months, not less than 4 in no. Col. Tour.
Second best, Diploma.

In awarding premiums on hogs, reference will be had not merely to size or present condition, but to that proportion between bone and meat which promises the greatest value from the least amount of feed.

POULTRY.

For the best lot of Dorking fowls, not less than 3, one cock and two hens,........	$3	For the best pair of ducks,...	3
For the best lot of Black Poland, not less than 3,......	3	" " " turkeys,.	3
For the best lot of large fowls not less than 3,............	3	" " " geese,..	3
		For the best and greatest variety of fowls, by any one individual,................	10

VEGETABLES.

For 6 best stalks celery,....	$2	2 best purple egg plants,....	$1
3 best heads cauliflower,...	2	Best half peck Lima beans,..	1
3 best heads broccoli,.......	2	Best " Windsor beans,	1
12 best white table turneps,.	1	Best bunch double parsley,..	1
12 best carrots,............	1	3 best squashes,............	1
12 best table beets,.........	1	Largest pumpkin,...........	1
12 best parsneps,...........	1	12 best ears seed corn,......	1
12 best onions,............	1	Best half peck table potatoes,	2
3 best heads of cabbage,....	1	Second best " "	1
12 best tomatoes,..........	1	Best variety seedling "	5

Discretionary premiums will be awarded on choice garden products not enumerated above.

FARM IMPLEMENTS.

Best plow,................	$15
Second best,......	Silver Medal.
Third best,............	Diploma.
Best subsoil plow,..........	$10
Best farm wagon,..........	10
Second best,........	vol. Trans.
Best half doz. hand rakes,..	Dip.
Best grain cradle,..........	$3
Second best,..........	Diploma.
Best half doz. hay forks,	Diploma.
Best harrow,...	Colman's Tour.
Second best,........	vol. Trans.
Third best,............	Diploma.
Best fanning mill,	Silver Medal.
Second best,........	vol. Trans.
Third best,............	Diploma.
Best improved ox-yoke,.	Col. T.
Second best,..........	Diploma.
Best axe,..................	$2
Best farm harness,........	10
Best saddle,................	5
Best machine for cutting cornstalks,..............	5
Best horse power machine,.	10
Best cultivator,..	Colman's Tour.
Second best,..........	Diploma.
Best drill barrow,..	Colman's T.
Second best,.........	vol. Trans.
Best farm horse cart, .	Col. Tour.
Best ox cart,....	Colman's Tour.
Best horse rake,.	Colman's Tour.
Second best,........	vol. Trans.
Best half doz. grass scythes,	Dip.
Best " cradle "	Dip.
Best " dung forks,..	Dip.
Best threshing machine,....	$10
Second best,.........	vol. Trans.
Third best,............	Diploma.
Best straw cutter,..	Silver Medal.
Second best,........	vol. Trans.
Third best,............	Diploma.
Best clover machine,.......	$10
Second best,..........	Diploma.
Best hoe,.................	$2
Best flax and hemp dressing machine,................	$10

Articles not presenting any new and valuable improvements, will not be entitled to premiums. Implements and machines must be tested as far as possible, in the presence of the committee.

BUTTER.

For the best lot made from five cows, in 30 successive days—quality as well as quantity considered—25 lbs. of the butter to be exhibited, $25.

Second best,........... 15
Third best,............ 10

Compliance with the following rules will be strictly required of those who compete for these premiums, viz: The cows to be fed on pasture, green corn-stalk fodder, or grass cut for the purpose, only. No grain, roots or slops of any description, to be fed during the trial, nor for 15 days preceding the trial. The cows to be owned by the competitors previous to the 1st day of April, 1845. The milk drawn from the cows on some one day during the trial, to be accurately weighed and measured, and the result stated. A sample of at least 25 lbs. of the butter so made to be exhibited at the Fair at Utica, for the inspection of the examining committee. The particular breed of the cows to be stated, if known, and the method of making and preserving the butter. A certificate signed by the owners of the cows, and at least one other person who assisted in milking and making the butter, detailing the above particulars, will be required.

The Executive Committee believe that few if any premiums offered on neat cattle will result in greater benefit to the farming interest, than those on the products of the dairy, providing fixed rules, requiring uniformity of feed, be faithfully enforced. The increased list of premiums is offered with the hope it will induce extensive competition throughout the state. Let this object be accomplished, and an opinion approximating to accuracy may be formed by the public which of the several breeds of cows are the best for dairy purposes, and from those that prove the best, further improvement may be made.

Best 25 lbs. made in June,..	$10
Second best,....	Colman's Tour.
Third best,..........	vol. Trans.
Best 50 lbs. made at any time,	$15
Second best,......	Silver Medal.
Third best,........	do.
Fourth best,.......	do.
Fifth best,........	do.

The claimants for premiums must state in writing the time when it was made; the number of cows kept on the farm; the mode of keeping; the treatment of the cream and milk before churning; the mode of churning, winter and summer; the method of freeing the butter from the milk; the quantity and kind of salt used; whether saltpetre or any other substances have been employed.

The butter offered for premiums must be presented in butter tubs, jars or firkins.

CHEESE.—Not less than 100 lbs.

One year old or over.

Best,......................	$15
Second best,......	Silver Medal.
Third do.......	do.
Fourth best,.......	Silver Medal.
Fifth do........	do.

Less than one year old.

Best,......................	$15
Second and Third,	Silver Medals.
Fourth best,......	Silver Medal.
Fifth best,........	do.

Those who present cheese for the premiums offered, must state in writing the time when it was made; the number of cows kept; whether the cheese was made from one, two or more milkings; whether any addition is made of cream; the quantity and kind of salt used; the quantity of rennet used, and the mode of preparing it; the mode of pressure and the treatment of cheese afterwards.

MAPLE SUGAR.

Best 25 lbs.,...............	$15
Second best,...............	10
Third best,.....	Colman's Tour.
Fourth best,..........	Diploma.

CORNSTALK SUGAR.

For the best experiment in the manufacture of sugar from cornstalks, from one acre of northern corn cultivated for the purpose, so as to obtain the greatest quantity of sugar, $25.

The process of manufacture and clarifying must be particularly stated in reference to the maple and cornstalk sugar.

SILK.

Best specimen manufactu'd,	$15
Second best,..............	10
Third best,.....	Colman's Tour.
Fourth best,........	vol. Trans.
Best pound reeled silk,.....	$10
Second best,....	Colman's Tour.
Third best,............	Diploma.
Best half bu. cocoons, 1845,.	$10
Second best,....	Colman's Tour.
Third best,............	Diploma.

DOMESTIC MANUFACTURES.

Best woollen blankets, $5—Second, 4—Third 3.
Best ten yards flannel, $5—Second, 4—Third, 3.
Best 10 yards woolen cloth, $5—Second, 4—Third, 3.
Best woolen carpet, $5—Second, 4—Third, 3.
Best tow cloth, 15 yards, $1—Second, diploma.
Best 10 yards linen, $5—Second, 4—Third, 3.
Best 10 yards linen diaper, $5—Second, 4—Third, 3.
Best hearth rug, $5—Second, 4—Third, 3—Fourth, 2—Fifth, 1—Sixth, Diploma.
Best 10 yards kersey, $3—Second best, 2—Third, 1.
Best rag carpet, 15 yards, $3—Second, 2—Third, 1.
Best double carpet coverlet, $4—Second, 3—Third, 2—Fourth, 1
Best pair woolen knit stockings, $2—Second, 1—Third, Diploma.
Best wove woolen stockings, $2—Second, 1—Third, Diploma.
Best cotton wove stockings, $2—Second, 1—Third, Diploma.
Best lb. of linen sewing thread, $2—Second, 1—Third, Dip.
Best linen woven stockings, $2—Second, 1—Third, Diploma.
Best linen knit stockings, $2—Second, 1—Third, Diploma.
Best knit cotton stockings, $2—Second, 1—Third, Diploma.

FRUITS.

For the greatest variety of table apples, $5.

For the second greatest,..... $3
For the third greatest,.. vol. Tr.

For the best twelve sorts, not less than three of each, $3.

Best new seedling apple, $3.

For the greatest variety of table pears, $3.

For the second greatest,......................	Vol. Transactions.
For the greatest variety of winter pears,.......	" "
For the best twelve Quinces,..................	" "
For the best twelve peaches,..................	" "
For the best twenty-four plums,...............	" "
For the best six bunches of native graves,......	" "
For the best six bunches of foreign grapes,.....	" "

FLOWERS.

For the greatest variety and quantity, Gold Medal.

For the second greatest, ... $5
For the third greatest,...vol. Tr.

For the best Floral ornament, Silver Medal.

For the second best,........	$3
For the third best,...	vol. Trans.
For the best seedling Dahlia,	$3
For the second best,........	2

For the best twenty-five varieties of Dahlias, $5.

For the second best,........ $3
For the third best,...vol. Trans

PLOWING MATCH.

First premium,............	$15
Second do.	12
Third premium, ...	$10
Fourth do.	Colman's Tour.

Fifth, vol. Transactions.

For boys under 18 years of age.

First premium,........... $10
Second,..................... $5

Third, vol. Transactions.

Each competitor will be required to plow one-fourth of an acre of sward land in 75 minutes, the furrows not less than 10 inches wide and 6 deep—plowman to drive his team.

FIELD CROPS.—At Winter Meeting.

Best crop of wheat not less than two acres, $15.

Second best,............... $10
Third best,........2 vols. Trans

Best two acres of spring wheat, $15.

Second best,............... $10
Third best,........2 vols. Trans.

Best crop of Indian corn, not less than two acres, $15.

Second best,............... $10
Third best,........2 vols. Trans

Best crop of barley, not less than two acres, $10.

Second best,................ $5
Third best, ...vol. Trans.

Best crop of rye not less than two acres, $10.

Second best,................ $5
Third best,..........vol. Trans.

Best crop of oats, not less than two acres, $10.

Second best,................ $5
Third best,..........vol. Trans.

Best crop of potatoes for table, not less than one acre, $10.

Second best,................ $5
Third best,..........vol. Trans.

Best crop of potatoes, quantity considered, not less than 1 acre, $10.

Second best,................ $5
Third best,..........vol. Trans.

Best crop of sugar beets, not less than half an acre, $10.

Second best,................ $5
Third best,..........vol. Trans

Best crop of Mangel Wurzel, not less than half an acre, $10.

Second best,................ $5
Third best,..........vol. Trans.

Best crop of Ruta Baga, not less than one acre, $10.

Second best,................ $5
Third best,..........vol. Trans

Best crop of carrots, not less than one acre, $10.

Second best,................ $5
Third best,..........vol. Trans.

Best crop of peas, not less than one acre, $10.

Second best,................ $5
Third best,..........vol. Trans.

Best acre of corn for fodder, $5.

Best half acre of hops,......	$5
Best " " flax,.......	5
Best half acre of tobacco,....	$5
Best acre of cabbage,.......	5

Best acre of broom corn, $5.

Best acre of clover seed, $10.

Second best,....Colman's Tour.
Third best,..........vol. Trans.

Best acre of grass seed, $10.

Second best,....Colman's Tour.
Third best,............Diploma.

Those who present claims to premiums for farm crops, must state in writing the following particulars:—The condtion of the soil at the commencement of cultivation for the crop; the previous crop and cultivation, and quantity of manure used upon it; the quantity and kind of manure the present season; the quantity and sort of seed used; the time and manner of sowing, cleaning and harvesting the crop; the amount of the crop determined by actual weight or measurement; and the expense of cultivation. The land shall be measured by some surveyor, who shall swear to the correctness of his survey, and that it was made with a chain and compass—and the claimant of the premium, with two other persons who assisted in measuring, shall certify under oath as to the quantity produced from the piece of land mentioned in the certificate of the surveyor—and a sample of grain shall be presented at the annual meeting with the oath of the applicant that that the same is a fair sample of the whole crop.

MISCELLANEOUS.

Wrought Iron Gate with cast iron pillars,............	$10
Best iron wheel barrow,....................	Silver Medal.
Ornamental cast iron vase on pedestal,...............	8
Best sample drain tile,......................	Silver Medal.
Best quarter of an acre ozier willow,................	8

DISCRETIONARY PREMIUMS

Will be awarded for such implements, products, &c., not enumerated, as shall be deemed worthy of notice or encouragement.

REGULATIONS.

The premiums for Essays and Agricultural Implements, will be open to citizens of other states; all others will be confined to residents of this state, who are members of this society, or who may become so by the payment of one dollar on entering their articles.

The trial of plows will take place at Utica, on Tuesday, the 15th day of September.

No premiums will be paid on any animals or articles taken away before the close of the Fair.

Premiums not claimed within four months after they are awarded will be considered as donations to the Society.

All persons who intend to exhibit Cattle, Horses, Sheep or Swine, should give notice to **Theodore S. Faxon**, Utica, or **Luther Tucker**, Recording Secretary, Albany, previous to the 10th of September, that the necessary arrangements may be made for their accommodation—and all animals must be on the ground by 9 o'clock, A. M. of the 17th September.

All those who intend to compete for the premiums on agricultural implements, butter and cheese, sugar, cocoons, silk, &c. should have their specimens on the ground on the 16th, that they may be deposited in their appropriate places, and the rooms suitably arranged on the day previous to the Fair.

Applicants for premiums are requested to pay particular attention to the notes attached to the premiums on Fat Cattle and Fat Sheep, Butter and Cheeese, Field Crops, Maple Sugar, &c.

The statements required from those who compete for field crops, must be sent to **Luther Tucker**, Recording Secretary, Albany, previous to the 1st of January, 1846, and the premiums will be awarded at the annual meeting of the society, on the third Wednesday of January.

Competitors for the premiums on Essays, must forward their manuscripts to the Rec. Secretary, Albany, previous to the 1st of January, 1846, free of postage.

No premium will be awarded, unless, in the opinion of the Judges of the Class in which it is offered, the animal or article is worthy of such premium.

Prize animals and implements at the previous exhibitions, will be allowed to compete for the prizes: but they must receive a higher prize, or in a different class, to entitle them to a premium. Should the same premium heretofore given them be awarded, they will receive a certificate to that effect, instead of the prize.

Animals and other articles offered for competition, must be labelled with the names and residence of the owners at full length.

No viewing committee, with the exception of the committee on Discretionary Premiums, shall award any discretionary premium, without the previous permission of the Executive Board, expressed through the President.

CONDENSED CORRESPONDENCE.

Virginia.—Extract of a letter from our correspondent **Za. Drummond**, Esq., dated Amherst, Jan. 22:—"We have had but three snows this winter; one about three inches deep, and lying about three days; and the other two about one inch, and lying a few hours. Our plows have been in motion nearly all winter. Our wheat looks well, and grass is beginning to spring. Good land, lying well, four to five dollars. Richest kind of mountain land one dollar. The finest sheep walks in the world. What a fortune a yankee could make here. Come and see."

Items.—Mr. Geo. L. Beckwith, of West Henrietta, Monroe county, informs us that the wheat crop in that neighborhood last year, was better in quantity and quality than it had been for several previous years. The *potatoe rot* made its appearance last season, and effected the crop to some extent, but did not do much damage.

Sweet and sour apple.—Mr. B. says he has two trees which produce this kind of fruit. The sour fruit resembles the Rhode Island Greening, &c.

Geology—Mr. B. says—"Some writers speak in glowing terms of the benefit the State works now publishing are to the farmer, but I can hardly understand this, if they are not placed where the farmer can obtain them, and at prices which he can afford to pay. Would not the State show its liberality, by placing a few copies in regularly organized public libraries in the different counties, or at least, deposit a few copies in some central places in each county, giving due notice thereof, that farmers may at least see what they are?"

Trimming Grape Vines.—Mr. Sidney Weller of Brinkleyville, North Carolina, has a vineyard of five or six acres, and makes eight to ten barrels of wine yearly. He thinks it best, for his location *not* to trim grape-vines after the first two or three years. He practices on this mode, and states that his vines produce abundantly. He keeps swine in his vineyard to eat the fallen fruit, and keep the ground clear of weeds and grass. He says—"I keep all clear underneath, from the first start of the vines, so as to leave a free passage for the wind, as well as for persons, and for the team used in scarifying the ground."

Subsoil Plowing.—We give the following from a letter of H. W. S. C., Oatlands, N. J.—"As I think experiments which do not succeed are as deserving of record as those which do—in order that the public may see both sides of a question, I wish to inform you that I procured a subsoil plow last spring, and used it for three different crops, viz: corn, potatoes and barley. The corn was planted on a light sandy loam, the potatoes on a rich loam inclining to be clayey, and the barley on a rich mellow loam. One half of each field was subsoiled to the depth of eight inches, the other half having only an ordinary plowing. There was no perceptible difference in the appearance of either of the crops during the season of growth, and as the difference at harvesting, if any, was not enough for us to discover it by careful observation and comparison of portions of the field, I did not think it worth while to make an accurate measure of the whole of each division."

Pomegranate Melon.—A correspondent at Syracuse who signs "B," informs us that he obtained from Indiana last year, some seeds of a melon with this name. He gives the following description of it. He hopes to have seed to spare another year. "The seed is nearly the shape of a muskmelon, but smaller. The vines are nearly like the muskmelon. The fruit is round and about the size of a large orange, and is, when growing, dark and light green; when ripe, yellow, with irregular greenish spots and streaks presenting a beautiful fruit. The taste nearly like a muskmelon. I think them a very good fruit, but not particularly delicious, though some of my family and friends who tasted them liked them very much."

Melons.—**Mr. L. Durand**, remarks in reference to the inquiry of "W." of Troy, given in a former number, that the variety of the muskmelon called the "citron," or as Mr. D. thinks it should more properly be called, the "pine-apple melon," is one of the richest of fruits, and is thought by some to resemble the pine-apple in taste. He says they grow from the size of a quart to a two-quart measure. Mr. D. kindly promises to send us a paper of seeds in the course of the winter.

Rapid Growth of Pigs.—Extract of a letter from S. Root, Esq., Middlefield, Mass.—"Worcester Taylor of this town, slaughtered a pig just 10 months old, which weighed when dressed, 410 lbs.; several others have been killed, which weighed over 360 lbs., from 9 to 10 months old."

Clinton Co. Ag. Society—At the winter meeting of this Society, as we are informed, by **Mr. Willet Keese**, there were applications for premiums on wheat for crops varying from forty to forty-nine bushels to the acre—one of corn, over 100 bushels—one of potatoes, 496 bushels—which, says Mr. K., "will be considered not bad for this cold region."

Cortland County Agricultural Society.—Extract of a letter from **P. Barber**, Homer:—"Our Agricultural Society held its annual meeting last week for the election of officers, &c. Rufus Boies of Cortlandville, President; George Chamberlain, Homer, Rec. Sec.; Paris Barber, Cor. Sec.; Amos Rice, Treasurer."

Oneida County Agricultural Society.—At the annual meeting of this society, on the 6th ult., the following gentlemen were elected officers for the ensuing year: Elon Comstock, Rome, President. Henry Rhodes, Trenton; John Townsend, Westmoreland; George L. Brigham, Augusta; Alanson S. Filer, Florence; Lewis Benedict, Vernon; Benjamin F. Jewett, New-Hartford;

Horace H. Eastman, Marshall; Lewis Eames, Lee; Horatio N. Cary, Marcy; and Philo Griswold, Vernon, V. Prest's. N. S. Wright, Vernon Centre, Cor., and B. N. Huntington, Rome, Rec. Sec'ys. Wm. Bristol, Utica, Treasurer. John S. Peckham, Utica; Hiram G. Everett, Kirkland; Ira Lillybridge, Annsville; A. S. Newberry, Sangerfield; and Ephraim Storrs, Trenton, Managers.

CONNECTICUT SEED LEAF TOBACCO SEED.

THE true broad and narrow Seed Leaf Tobacco Seed, selected from growth of 1844, for sale at the Seed Store of the Hartford County Agricultural Society, by E. W. BULL, Seedsman.

Feb. 1—3t.

LOUISVILLE KY. SEED AND AGRICULTURAL STORE.

GEORGE, LAPPING & Co., keep constantly on hand
Kentucky Blue Grass, extra clean for Lawns.
Kentucky do. do. in strips,
Hemp seed,
Timothy,
Clover,
Orchard Grass,
Red Top.

All orders promptly attended to.

MUNN & PETTIBONE,
206 Pearl St., N. Y., Agents.

SPLENDID FARM AND COUNTRY SEAT FOR SALE.

I NOW offer for sale my farm, consisting of 170 acres of the richest of the Mohawk Flats, all under improvement and in a highly productive state, together with the substantial and superbly finished brick mansion erected by the late Gen. John G. Weaver, at an expense of about $10,000. It is one and three-quarter miles from the city of Utica, on the north bank of the Mohawk, over a McAdam road. It has a beautiful orchard, garden, farm-house, barns, stables, sheds, &c., and is finely watered, and now stocked with choice Durham and grade cattle, Bakewell and Southdown Sheep, and all necessary farm implements; all of which will be sold at a great bargain to the purchaser. D. SKINNER.

Utica, January 1, 1845—3t*

HUSSEY'S REAPING MACHINE.

THE subscriber has now brought his Reaping Machine to the highest state of improvement. The cutting of four harvests has proved the last improvements to be permanent and durable. The four horse machine is warranted to cut from 15 to 20 acres per day—price, $170. The light two horse machine is warranted to cut from 12 to 15 acres per day—price $100. Medium size, price, $140. Farmers who intend getting machines to cut their next harvest, will please send their orders soon. References are given in the Dec. number of the Cultivator, 1844. Also for sale, my corn and cob crusher, an improved article; price 25 dollars. OBED HUSSEY.

Baltimore, Nov. 1844—4t*

FOR SALE.

THE splendid two years old Bull "Marius," belonging to Thomas Oliver Esq., of Riversdale, Sing Sing. Marius was imported in 1843 from the far famed stock of Earl Spencer, of Wiseton, Northamptonshire, and was subsequently exhibited at the State fair, held at Po'keepsie, in 1844, at which place he took the first premium of the yearlings in the short-horned class, as also that of the year olds against all classes then exhibited. Subsequently at the Fair of the American Institute last autumn, he was again awarded the first prize for the yearlings of his class. He is a Roan Bull of the most complete symmetry, and although only two years old on the 5th of last Dec., weighs about 20 cwt.

Pedigree—Marius, a Roan Bull—calved December 5th, 1842, got by Roman, dam by Waverly—gr. dam by Satalite—gr. g. dam by Cato—gr. g. g. dam by St. John—gr. g. g. g. dam by Chilton—gr. g. g. g. g. dam by the White Bull—gr. g. g. g. g. gr. dam by Favorite—gr. g. g. g. g. g. gr. dam by Duke. Signed, George Earl Spencer.

Letters, post paid, may be addressed to the subscriber.

Sing-Sing, N. Y. Jan. 28, 1845.—tf. JOHN LUMSDEN.

ISABELLA GRAPES, of proper age for forming Vineyards, propagated from and containing all the good qualities which the most improved cultivation for over ten years has conferred on the Vineyards at Croton Point, are now offered to the public. Those who may purchase will receive such instructions as will enable them to cultivate the Grape with entire success, (provided their location is not too far North.) All communications, post paid addressed to R. T. UNDERHILL, M. D., 400 Broadway, New York, will receive attention. He feels quite confident that he has so far meliorated the character and habits of the Grape Vines in his Vineyards and Nurseries, by improved cultivation, pruning, &c., that they will generally ripen well and produce good fruit when planted in most of the Northern, and all the Western, Middle and Southern States.

January 20.—2t.

AMERICAN Farmers Encyclopedia, price $4—Skinner's Cattle Doctor, price 50 cents, and a variety of other works, for sale at the office of "The Cultivator."

BOMMER'S METHOD AT REDUCED PRICES.

THE cheapness and expedition, by which manure may be manufactured with the Bommer process, and the various substances to which it may be successfully and advantageously applied, render it a valuable acquisition to every farmer that will adopt it. To facilitate its general introduction, it is proposed to sell the method uniformly at five dollars. Any individual shall be promptly furnished with a copy of the method without charge of postage, who shall remit the cash by mail to the general agent. It is intended to employ a competent travelling agent, as soon as practicable, in each county. My general agency includes the States of New-York, New Jersey, Virginia, Delaware, Connecticut, Rhode Island, Massachusetts, New Hampshire, Maine and Vermont.

ONE HUNDRED AGENTS WANTED.

Wanted immediately, 100 active, intelligent and enterprising men to engage as travelling agents in the above mentioned States. Unquestionable testimonials will be required; and responsible securities will be expected, as guarantees, for the faithful discharge of the duties of the appointment. Persons of suitable qualifications, will find this both a useful and lucrative employment. Applications, if by mail, should be post paid and directed to me, at Westville, New Haven Co. Connecticut. ELI BARNETT, General Agent.

Westville, March 1, 1845.

FARMS FOR SALE.

THE farm in West Groton, known as 60 acres in the North East corner of Lot No. 63 Locke, consisting of a farm house nearly new, barn, and about 40 acres of improvement surrounded by a good fence, and now occupied by Robert Armstrong. Price, $1,500. One thousand dollars can remain on mortgage for ten years, at legal interest, half yearly.

Also—The farm known as the State 100 acres in the South East corner of Lot No. 2, Cicero, about a mile from the town of Brewerton, on the outlet of Oneida Lake, consisting of an improvement of 40 acres fenced, with log buildings, and sixty acres of woodlands.

Also—The farm known as the State 100 acres in the South East corner of Lot No. 64 Hannibal, a short distance from the town of Fulton, on the Oswego river, a good woodland, with a small clearing.

Also—The wood lot known as the State 100 acres in the South East corner of lot No. 5 Manlius, a few miles from Syracuse, and in a good neighborhood.

Also,

Wood lot	known as	the S.	100	ac.	in the S. E. c.	of lot No.	7	Solon
do	do	do		do	do	do	19	do
do	do	Survey	50	acres	do	do	25	do
do	do	do	50	do	do	do	29	do
do	do	do	50	do	N. W.	do	36	do
do	do	do	50	do	N. E.	do	39	do
do	do	do	50	do	S. E.	do	58	do
do	do	Sub 1	83	do		of lot	76	do
do	do	do 7	30	do		do	76	do
do	do	Survey	50	do	N. W	do	98	do
do	do	State	100	do	S. E.	do	65	Virgil
do	do	Survey	50	do	N. E.	do	68	do
do	do	Survey	50	do	N. W.	do	69	do

Apply to JAS. L. BRINCKERHOFF,
March 1, 1845—6t No. 32 Leight-street, New-York.

FINE FARMS FOR SALE AT AUCTION.

THE property known as the Stimson Farm, situated at Galway in the county of Saratoga and State of New-York, will be sold at auction, at the Court House in Ballston Spa, on Wednesday the second day of April next, at 12 o'clock noon. It contains in the whole about 325 acres and is so divided as to make three farms, each having on it the necessary farming buildings. The roads from Schenectady to the Fish House, and from Saratoga and Ballston to Johnstown, run through the property at right angles, dividing it into four parts. The two pieces lying north of the road, said to contain about 190 acres, will be sold together. On this part are, a large hotel, capable of accommodating one hundred boarders, with the most extensive and convenient buildings for agricultural purposes. It is a favorite place of resort for families in the summer season. This part of the property will be a most desirable investment for any person desiring to connect the business of farming with that of keeping a hotel of this description.

The south-eastern portion, said to contain about 90 acres, has a farm house and the necessary out buildings, with a wagon maker's and a blacksmith's shop. The south-western portion, said to contain about 50 acres, has on it a store and dwelling-house attached, farm house and barns, and is a most desirable property for any person wishing a small farm. Each farm has on it the proper proportion of woodland, and the whole is of the best quality for farming, there being no waste land, and in the highest state of cultivation. The situation is high, commanding a most beautiful and extensive prospect in all directions.

The sale will be positive and without reserve, to the highest bidder, and perfect titles will be given. The terms will be 5 per cent cash, to be paid to the auctioneer at the time of sale; 50 per cent may remain on bond and mortgage for five years, or a longer term, at 6 per cent interest, payable half yearly in the city of New-York, on the first of May and November, and the balance to be paid in cash on the delivery of the deed. For further particulars, apply to JOHN W. THOMPSON, Esq., Ballston Spa, or to J. OAKLEY, No. 77 Nassau-street, New-York.

Dated New-York, Dec. 9, 1844—3t.

FARM IN ILLINOIS.

FOR SALE—A good farm, with valuable improvements. The subscriber being about changing his business, will sell a great bargain. Also has in immediate vicinity, 2,000 acres choice land, which he will sell at a discount from government price. Address ISAAC HINCKLEY, P. M., Audubon, Montgomery Co., Illinois.

Dec. 1, 1844—tf.

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☞ **ADVERTISEMENTS inserted in the Cultivator, at $1,00 per 100 words for each insertion.**

AGRICULTURAL AND BUSINESS AGENCY.

KNOWING the convenience that such an Agency will be to his distant friends, the subscriber offers his services for the purchase of Match and Single Horses, Cattle, Sheep, &c.

Wagons, Carts, and Carriages.

Plows, Cultivators, Harrows, Rollers, Corn-Shellers, Corn and Cob Grinders, Threshing Machines, Grain-Reapers, Horse Power, and all other agricultural implements.

Seeds and Merchandise of every kind.

Manures.—Peruvian and African Guano, Ground Plaster, Ground Bones, Oyster Shell and Stone Lime.

Agricultural and other books.

From his long experience as a farmer and stock breeder, and general acquaintance with business, the subscriber trusts that he shall be able to give satisfaction. The commission charged for his services in purchasing or selling, will be moderate. Cash or produce must invariably be in hand, before orders can be executed.

Feb. 18, 1845—3t. A. B. ALLEN, 205 Broadway, New-York.

AGRICULTURAL CHEMISTRY AND GEOLOGY.

CATECHISM of Agricultural Chemistry and Geology, by James F. W. Johnston, M. A. F. R. S. S., L. & E. with an Introduction by John Pitkin Norton of Fermington, Ct., from the 8th English edition with notes and additions by the author, prepared expressly for this edition.

N. B.—The above work, first published a year ago, has already gone through eight large editions, and is now used in 3,000 schools in Ireland, and nearly all the schools in Scotland. The present edition, improved from the eighth, and adapted to this country, is now ready—price 18¾ cents. A liberal discount allowed to the trade. All orders promptly attended to.

ERASTUS H. PEASE,
Albany, March 1, 1845. Publisher, 82 State-street.

ALBANY SEED STORE.

THE proprietor is now receiving from his seed growers, a full and complete assortment of American Garden Seeds, all of which are selected with care, being grown from the best varieties of vegetables to be found in the country; also European seeds, plants and flower seeds from the best establishments in Europe and America.

Fruit trees of all the choicest kinds furnished to order at the lowest market prices, and warranted true as represented. Agricultural and horticultural implements of American and European manufacture. Also, Root-Slicers, Corn-Shellers, Straw-Cutters, &c. Those who wish to purchase or examine are respectfully invited to call.

W. THORBURN, Seedsman & Florist.
March 1, 1846—3 t. corner of Broadway and Maiden Lane.

HEDGES.

THE subscribers offer for sale 30,000 Osage Orange, (Maclura,) one year old, strong thrifty plants, admirably adapted for hedging. Price, ten dollars per thousand. Address post-paid,

D. LANDRETH & FULTON,
Philadelphia, March 1—1t. Nurserymen and Florists.

SILK WORM EGGS.

SIXTEEN ounces of the best Lombardy silk worm eggs on cloths, received lately from Italy, in good order. Arrangements will be made for sale of the whole or part, by applying early or by letter post-paid, to G. W. HAYWOOD, & Co.
New-York, March 1, 1845. 38 Beaver street.

SEED STORE AND AGRICULTURAL WARE-HOUSE.

OUR Spring supply of seeds is now ready, and we shall be happy to receive orders for Field or Garden Seeds, of every description, Black Sea, Italian and Siberian Spring Wheat, Barley, Peas, Clover Seed, Timothy Seed, Seed Corn, Shaker and other Garden seeds, &c. Also, a full assortment of farming tools selected from the best manufacturers in the country. Hoes, Scythes, Forks, &c. cheap by the dozen. E. COMSTOCK.
Rome, Oneida county, March 1, 1845.

SPRING WHEAT.

THE subscriber has for sale, an excellent sample of Italian Spring Wheat. The original seed was obtained by him many years ago. It has therefore become perfectly acclimated, and great care having been taken to always save the best and heaviest for sowing, it has much improved, both in weight and productiveness. The price is $2 per bushel. A sample may be seen at the Cultivator office.
Guilderland, Feb. 1845 WILLIAM MERRIFIELD.

ROME PLOW FACTORY.

THE DIAMOND PLOW which received the first premium at the State Fair at Poughkeepsie, as well as at every County Fair where it has been shown, is manufactured by the subscribers in the very best style, and for sale at wholesale or retail. Also, some eight or ten patterns of approved plans, as well as Scrapers, Cultivators, Cradles, Mott's Agricultural Furnaces, &c. Orders from abroad promptly filled, and a liberal discount to dealers.
March 1, 1845. BRAINERD & COMSTOCK.
Rome, Oneida county.

WARREN'S IMPROVED PORTABLE HORSE POWER AND THRESHING MACHINES.

THE principle of these celebrated Machines is admitted to be correct and superior to any others; and the important improvements now completed in their construction, entitles them to the fullest confidence of agriculturists, while their price brings them within the means of all farmers, as increasing demands prove.

Prices of one horse power and thresher together, $60—two horse power and thresher together, $75—four horse power and thresher together, $110. Leather bands, $4 and $5.

Orders for any number will be promptly met this season on the usual terms—payment on delivery in this city in cash or approved paper.

H. BARTLETT & Co.
Successors to L. Bostwick & Co.
March 1—1t. 146 Front-street, New-York.

FARM AND VILLA AT AUCTION.

INTENDING to change my residence, I will, on Tuesday the 18th day of March, (unless previously disposed of at private sale,) sell at public auction on the premises, my present mansion, situated one mile from the city of Troy, consisting of a new and substantial brick cottage, containing eleven rooms, finished in a chaste style, but in the very best manner; stable and carriage-house, ice-house, &c., with 15 acres of land; an orchard just beginning to bear, and a garden furnished with choice shrubbery in full bearing. The surrounding landscape is highly picturesque and beautiful.

Also, a farm adjoining, containing 87 acres excellent land, well watered, and suitable for any agricultural purpose, but especially for the milk business. There are on it 3 dwellings, 2 of them built in 1840—2 barns, with stables and sheds for stock.

Also, the stock and farming utensils, and most of the furniture of the house.

Those wishing to purchase, are respectfully invited to call and view the premises, when the terms of payment and other particulars of the sale will be made known. A. D. SPOOR.
Brunswick Place, March 1, 1845—1t*

FOR SALE.

THE subscriber offers for sale his fine Durham bull Osceola. He is now two years and a half old, and has taken the 1st premium at two successive State Fairs; for pedigree and further description, see Cultivator, Sept. 1843.

Also, his thorough bred Stallion Young Florizel.
Watervliet, Dec. 16, 1844—tf. CLARKSON F. CROSBY.

Printed at the Steam Press of C. Van Benthuysen & Co.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES.

VOL. II. ALBANY, APRIL, 1845. No. 4.

THE CULTIVATOR
Is published on the first of each month, at Albany, N. Y., by
LUTHER TUCKER, EDITOR AND PROPRIETOR.

ONE DOLLAR A YEAR.

SEVEN copies for $5,00—FIFTEEN copies for $10,00—all payments to be made in advance, and free of postage.

☞ Complete sets of the *First Series* of "THE CULTIVATOR," consisting of ten vols., quarto, are for sale at the office, and may be ordered through the Agents of the paper throughout the country. Price, stitched,—vols. 1, 2, 3 and 4, 50 cents each—vols. 5, 6, 7, 8, 9 and 10, $1,00 each—for the whole set, $8 00.

OFFICE IN NEW-YORK CITY, AT
M. H. NEWMAN'S BOOKSTORE, No. 199 BROADWAY,
where single numbers, or complete sets of the back volumes, can always be obtained.

☞ This paper is subject to newspaper postage only, being one cent within the state or within 100 miles of Albany, and 1½ cent for any greater distance.

THE CULTIVATOR.

MONTHLY NOTICES.

COMMUNICATIONS received, since our last, from J. P. Norton, D. K. Minor, Chas. Hamilton, J. W. Williams, S. W., C. Hamilton, W. Jennison, T. H. Hyatt, Za. Drummond, J. M. B., S. W., B. P. Johnson, H. Boyd, W. Wadsworth, E. N. Horsford, E. Comstock, L. Durand, John Crary, J. A. Rhodes, Vindex, D. G. Mitchell, A. L. Bingham, H. Gardner, H. Ford, A Farmer's Son, S. W. Jewett, D. K. Young.

From Messrs. WILEY & PUTNAM, publishers, New-York, we have received No. 1 of "The Chemistry of Vegetable and Animal Physiology," translated from the Dutch of Dr. G. T. MULDER—"Guano, its origin, properties and uses, with directions for using it;" and "A Lecture on the Philosophy of Vegetation, by W. A. SEELEY, Esq."—From some unknown friend, "Transactions of Clinton Co. Ag. Society for 1844"—Catalogue of Western Reserve College for 1845—From Hon. H. L. ELLSWORTH, his Annual Report from the Patent Office—From the Authors, an Address before the Addison Co. (Vt.) Ag. Society, by S. H. JENISON, Esq., and an Address before the Litchfield Co. (Ct.) Ag. Society, by T. S. GOLD, Esq.—From the publishers, Messrs. APPLETON & Co. New-York, Stewart's "Stable Economy," reprinted from the last English edition, with notes and additions by A. B. Allen, Esq.

☞ Our respectful acknowledgments are due to Governor REID, of the Island of Bermuda, for a copy of his work entitled "An attempt to develop the LAW of STORMS, by means of Facts arranged according to Place and Time; and hence to point out a course for the VARIABLE WINDS, with a view to PRACTICAL USE IN NAVIGATION." The volume embraces 572 pages, and is executed in beautiful style. The design of the work seems to be rather to embody facts and excite inquiry, than to defend theories. A large amount of interesting and valuable matter seems to be here collected relative to the science of meteorology, and the work is eminently worthy the attention of those whose taste and opportunities may lead to an investigation of the laws of atmospheric phenomena.

An interesting communication from WM. WEBB, Esq. of Wilmington, (Del.) on the proper culture of corn, and the process of making sugar from its stalk, reached us too late for this number. It will appear in our next. We shall be glad to receive the sample of sugar spoken of, by Express.

CIRCULATION OF THE CULTIVATOR.—We have the pleasure of announcing to our agents and friends, that through their kind and efficient exertions, the circulation of "The Cultivator" now amounts to over THIRTEEN THOUSAND copies, being an average accession of one thousand copies a week since the commencement of the present volume. This is a much larger circulation than we have had for the last two years at this season of the year. For these tokens of the public approbation of our labors, we are by no means ungrateful; and while tendering our thanks to those who have so efficiently aided us in our efforts to "improve the soil and the mind," both by their contributions to our pages and their exertions to extend the circulation of our paper, we beg to assure them that we shall spare no exertions in our power to make The Cultivator more and more worthy of their regard.

CORRESPONDENCE OF THE CULTIVATOR.—The extensive correspondence of our publication, we presume is regarded with interest by our numerous patrons. It scarcely requires an argument to show that every individual is more or less concerned with the doings of others, especially with those of his fellow men, who are engaged in the same occupation with himself. Aside from the innate desire for the acquirement of information, and the pleasure which every one feels in attaining it, we can easily perceive that all knowledge may in some way become subservient to our *interest*. *All* facts or truths should be collected and preserved—thus constituting a treasure from which we may draw at our need, and from which we may derive light to illumine many a path which it may be our fortune to tread. In this view, should be regarded the information brought out by the correspondence of men of enlightened minds and observing habits, in various parts of the world. Our stock of knowledge, our store of *facts* of the most valuable kind, is thus increased.

In our present number, we give letters from three highly intelligent American gentlemen in Europe, viz: Mr. NORTON in Scotland, Mr. MITCHELL in England, and Mr. HORSFORD in Germany. In addition to this, our columns show a broad correspondence in our own country—embracing communications, as will be seen, from no less than twelve States, from Maine to Missouri. Among these will be found the letters of our traveling correspondent, SOLON ROBINSON, which we cannot doubt will be read with interest and advantage. Mr. R.'s narratives and descriptions are graphic and spirited; and we have no doubt that the nature and advantages of the various sections of the country through which he passes, as well as the condition of agriculture, &c., so far as can be learned, are generally faithfully delineated. It is possible that there may be occasionally an unnecessary degree of *pungency* in his remarks, but we feel confident that there is, in no case, the least design to give any unfair coloring, or to make statements not in accordance with the public good.

MR. DOWNING'S WORKS.—We invite the attention of all lovers of rural improvement to the advertisement of

Messrs. WILEY & PUTNAM, booksellers, New-York, published in this number. Every man of taste should possess copies of these books. Should any of our readers at a distance, desire our agency in procuring any one or more of them, it will afford us pleasure to attend to their orders.

GREAT SALE OF IMPROVED CATTLE.—It will be seen by an advertisement in this paper, that the extensive and well known herd of Improved Short Horn Cattle, the property of E. P. PRENTICE, Esq., Mount Hope, near this city, are to be sold at auction in June next. This sale is well worth the attention of all who wish to procure pure bred animals of this breed, as the public may rely upon the assurance that the animals will all be offered, and struck off to the highest bidder, without reserve. The list embraces a large number of animals of both sexes and all ages, many of which have taken prizes at the exhibition of the N. Y. State Ag. Society. Gentlemen at a distance, who cannot attend the sale, may find it to their advantage to avail themselves of the offer of our associate, Mr. HOWARD, an excellent judge of cattle, and upon whose judgment in selecting and purchasing such animals as they may wish to procure, they may safely rely.

NORMAN HORSES.—We would call attention to Mr. Harris' advertisement in this number, for the sale of Norman horses. From what we can learn, we have no doubt that they are a valuable stock, and well worthy the attention of those wishing to purchase.

SWEET, SOUR AND CORELESS APPLES.—We have condensed the communications of several correspondents on these subjects, but they will still occupy too much room to admit of their publication during the present pressure on our pages. We may make room for them hereafter.

SAMPLES OF WOOL.—We have received from J. R. SPEED, Esq. of Caroline, N. Y., several samples of wool. Mr. Speed has a flock of 45 merino sheep, which averaged 5 lbs. of wool per head, which sold for 50 cents per pound. The samples marked 2, 4, 8, 9, are of excellent quality. They must be a valuable flock.

SEWARD'S PATENT SEED-SOWER.—We have been shown one of these machines, which we think from its simplicity, and the perfect manner in which it performs its work, is one of the best we have seen. The manufacturers are M. and S. L. Seward, Guilford, New-Haven county, Conn. The machine will sow onions, turneps of all kinds, carrots, beets, peas, &c., at any desired distance, from 3 to 16 inches. Two acres of onions may be readily sown in a day, by one man, in the best manner. Mr. Thorburn of this city, will shortly have the machines for sale.

☞ We are much pleased to see the awakening spirit of improvement in the South-west. We learn from the *Shield*, published at Eufalla, Ala., that our friend and correspondent, ALEXANDER McDONALD, is elected President of the Barbour county Agricultural Society. The efforts of this association, appear judicious and effective.

BUTTER IN WELLS.—Our correspondent "Indicator," thinks there must have been some mistake about the circumstance mentioned in our last vol., page 70, of Mrs. Bement's butter having been kept two years in a well; and he doubts whether butter will sink in water at all. The case we mentioned is not a solitary one. As long ago as 1831, a correspondent of the Genessee Farmer gave an account of a roll of butter being taken from a well, which had been dropped in *twenty-one* years before. The writer says a piece of it was presented him, which "was as fine and sweet as the day it was churned," and for aught he knew, "better, for it was the very *cream* of butter."

LARGE CALVES.—The Elmira Republican says, a Durham bull-calf owned by W. W. Ballard, of Southport, weighed at birth, 98 pounds; at the age of four months and twenty-nine days, 588 pounds; and at 11 months and 24 days, 1,141 pounds. The same paper also states, that Mr. Brower, of Moreau, Saratoga county, has a bull-calf which weighed, at birth, 95 pounds; and at six months and one day old, 774 pounds.

BERMUDA GRASSES.—Mr. Redfield of New-York, informs us that the botanical names affixed to the specimens of Bermuda grass, noticed in our Dec. number of last vol., were furnished by Prof. TORREY of that city.

THE MEDAL OF THE N. Y. STATE AG. SOCIETY.—The dies for the new medal of this Society, cut by Mr. Taylor, of Birmingham, England, have been received, together with some specimens of the medals. For the emblamatic design of this chaste and beautiful article, the society is indebted to the good taste and judgment of our countryman, F. ROTCH, Esq., now in England. On the face of the medal is an elegant figure of Ceres, the head adorned with a garland, on the left arm a cornucopia, in the right hand a wreath; in the back ground, sheaves of wheat. On the reverse, a circular wreath, embracing fruits and heads of grains, on the outer margin of which are the words "New-York State Agricultural Society," the space in the centre being designed for the names, &c., of the individual to whom it may be awarded. The medal is in every respect creditable to the society and to the individuals by whom it has been executed.

LARGEST OF ALL PIGS.—We are informed that SAM'L ROBBINS, of Salisbury, Conn., lately slaughtered two pigs, in part of the Byfield breed, nine months and seventeen days old, one of which weighed 388, and the other 432 pound.

HOWELL'S PATENT TANNING MACHINE.—The New York Farmer & Mechanic highly recommends this machine. It is said to effect a great saving of time, labor, and expense. Calf-skins tanned in a week; upper leather in a week, and sole-leather in from fifteen to thirty days. The editor says he has examined various specimens of the leather tanned by this machine in the above space of time, and he pronounces them excellent.

BALLS OF WOOL IN LAMB'S STOMACHS.—Lambs which are dropped in the winter, frequently exhibit a habit of chewing and swallowing locks of wool which they pull from their mothers and other sheep. From this wool, balls are sometimes formed in the lambs' stomachs, which it is supposed occasions their death. In the Maine Farmer, Maj. E. Wood mentions a case of this kind having happened in the flock of his son, Mr. T. Wood. This unnatural habit of lambs seems to be caused by a desire to fill the stomach with some bulky substance on which it may ruminate, or chew the cud; and not finding its natural food for this purpose, it is induced to swallow the indigestible wool. The trouble would no doubt be prevented by giving the lambs suitable hay with turneps or potatoes, and feeding the ewe with those substances which would prevent the milk from having a costive tendency. We have frequently reared lambs in winter, but have been careful in providing suitable and abundant food, and never had them troubled with wool in the stomach.

SCOTCH CATTLE.—In the report of the commissioner of patents, we notice a letter from STEPHENSON SCOTT, on the subject of provisions for exportation, by which we discover that that gentleman is the author of a valuable series of letters on agricultural subjects, published twenty-five years since in the American Farmer, with the signature of "Albion." We read those letters at the time of their publication with great interest, but have never been able till now to learn their authorship. Mr. Scott appears to be well acquainted with the peculiar properties of various breeds of cattle, and though he thinks very highly of the Herefords and Durhams, he observes that he is inclined to think that some of the Scotch cattle are better adapted to a large portion of our country than any of the English breeds. The polled Galloways, particularly, he thinks would be very useful, and observes that—"They, like their countrymen, are hardy and thrive almost everywhere, and are large enough for all purposes and pastures."

PUPPIES SUCKLED BY A SHEEP.—The Prairie Farmer says that Mr. S. S. Crocker has a pair of puppies, a cross of the bull and shepherd's dog, which are suckled by a sheep. The ewe, it is said, manifests great kindness for them.

POTATOES.

The malady which has prevailed for a year or two, among potatoes, may operate as a discouragement to planting them as extensively as formerly. We venture not to give an opinion, from the little that is yet known, in regard to the origin of this disease, or to recommend any specific remedy; but from what we have seen, should not hesitate to adopt the following rules in planting, cultivation, &c. 1. To plant on loamy soils, of medium dryness. 2. If stable manure is used, let it be well mixed with the soil, and not left (especially if unfermented,) in too great quantity in the hill. 3. Plant good sized, *sound* potatoes, cutting only the largest ones. Very small potatoes, or small pieces, are not likely to sprout so vigorously as large ones. The first food of the young plant is the substance of the old potatoe, and the greater the supply of this food, the more rapid, of course, is the early growth of the shoot. It is true that under entirely favorable circumstances of soil, season, &c., the shoot from a small potatoe or from small pieces, may succeed, and the product from them in such cases, may not be much less; but it is reasonable that the shoot from a good sized and sound potatoe would be stronger, and less predisposed to suffer from any unfavorable influences belonging either to the soil or atmosphere. 4. Plant as early as the ground is in a proper state. Many cases might be cited where early planted potatoes escaped the blight or disease, and produced a good crop, when the same variety, planted later on a piece immediately adjoining, were much injured. 5. Plant only varieties of known hardiness. Much depends on this. Some kinds have always been remarkable for their healthy, hardy constitutions; at the same time producing more than others under the same circumstances. Of the feeble sorts, there is the Mercer, called also Chenango, Meshanic, (corrupted from Neshannock,) which from its supposed or acknowledged good qualities for the table, has been widely cultivated for several years past; but which has always been subject to blight—more so than most other kinds. We are not aware of any good qualities possessed by this potatoe that are not to be had in several other kinds, which have the advantage of greater hardiness and productiveness as well as soundness. 6. In cultivation, keep the crop clean from the "first start," but avoid plowing or working it when the ground is so wet as to be in the least *muddy*, and do not use the plow or cultivator after the blossoms appear; as a mutilation of the roots after this, may damage the *setting* of the tubers. Having used all these, and other reasonable precautions, we may say in the language of a witty disciple of Esculapius,

" If after that they choose to die,
Why, verily I let's 'em."

MAKING FENCE.

Every man knows that a good, strong, neat and straight fence is better than a crooked, ugly, and inefficient one. We have plenty of awkwardly built board fence all through the country; a little more pains, and some knowledge, would have made them better in every respect, with the same or less material, with no more labor. Indeed, working by rule, is not only nearer and better, but is generally much faster than by irregularity.

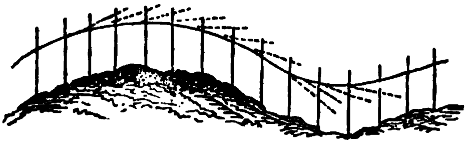
In *digging the holes*, they should be large enough to allow the pounder to work freely all round, and should in no case be less than two feet and a half deep. If less in depth, the fence will be in danger of leaning and becoming twisted, drawing the nails, lessening its strength, and destroying its good appearance.

To *set the posts perfectly straight*, stakes should first be driven on the line as accurately as possible, and two posts several rods distant, firmly set, perpendicularly, and precisely on the line. A strong cord, with a length twice as great as the distance between these two posts, is then to be very tightly stretched from one post to the other, near the surface of the ground; and passing back again from the second post to the first, near the top of each post. The face of each post is then to be set against these two cords; in this way, the workmen form a true right line with them, not varying half an inch, with the greatest facility. The *pounder*, for beating the earth firmly about them, should be shod at the lower end with a cast iron head. One hand should shovel in slowly, while another beats the successive layers firmly with the pounder; and if water is occasionally poured in, to soften the earth to the consistency of very stiff brick clay, it will pack more closely, and the post stand firmer when it becomes dry.

This mode of setting by two stretched cords, will enable a common operator to set nearly twice as many in a day, as by simply ranging with stakes without a line; and in addition, the work will be more accurately done. The cord, to be sufficiently strong, should not be much less than common bed-cord.

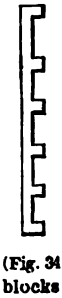
In *nailing on the boards*, the top board is first to be very accurately placed, as a guide for the rest of the fence. Where the surface of the ground is level, the top of this board should be perfectly straight, which may be done by stretching a cord tightly across the face of the line of posts, raising it from the slight curve it falls into, by a nail driven a quarter of an inch into each post. A little experience will enable any one to dispense with the use of the line, driving the nails in an exact range. Against this line of nails, the top board is to be placed and secured by nailing.

Where the surface of the ground is uneven, the fence, to suit it, should not be broken into awkward and irregular angles, but should pass over it by a succession of graceful curves. Such curves are easily made by a row of nails as already stated, each successive nail being driven a quarter of an inch or less, above the right line, in passing over a hollow, and below the right line, when rounding over a hill. These successive distances are easily estimated by the eye, with sufficient accuracy, without measuring. The annexed figure, strongly represented, to exhibit more plainly, will show how this is done. An experienced hand will thus lay off fifty rods in half a day. Marking the height of the fence on every fifth post with chalk, previously, will be useful.



(Fig. 33.)

To assist in nailing on the other boards, accurately and rapidly, procure two pieces of board, the length of which is to be equal to the height of the fence, or a little more, and saw notches in them, as represented in the annexed figure. The projections thus left, support the boards while they are nailed to the posts, these pieces of board being hung, by the upper projection, upon the top board, already in its place. All the distances between the different boards are thus measured without error, and one hand will proceed alone with the work as fast as two could do without this contrivance.



(Fig. 34.)

Then nail in blocks, made of square pieces of the fence board, on the face of the posts, between the boards; and over the whole of these, nail an upright facing board against each post, which secures the whole firmly to their places. These blocks may be made from small waste pieces, and require very little time to fit and nail them, while they afford great and permanent strength to the fence, as it is impossible to tear off or crowd from its position a single board without tearing down the whole fence. As but a single nail is thus needed for a board at each post, and also a single nail for each block, a less quantity of nails is needed in constructing it.

A neatly made fence, with narrow horizontal boards, has a much better appearance in the immediate vicinity of a dwelling, and among trees, than a *picket* fence. Where made of rough boards, as common farm fences they may as well be made neatly as awkwardly; and a coat of lime white-wash, early in summer, for a few successive seasons, will render these rough materials less liable to decay than a covering of oil paint.

A proper width of the boards, and of the distances between them, is a matter of some importance. A neat farm fence may be made of boards four inches, five inches, and nine inches wide, as follows—the top and cap board, four inches wide each; the three next, five inches wide; and the bottom one nine inches. The distances asunder may bé, between the two upper, seven inches; next five and a half inches; next, four inches, and the lowest, two and a half inches. A lighter and more elegant appearance will be given by using boards one inch narrower, and increasing slightly the distances asunder. For a finished fence near a dwelling, five boards only, three inches wide, should be used besides the bottom board, which should be eleven inches wide; and the distances apart should be five inches, four and a half, four, three and a half, and three inches. The posts should be square and cased handsomely.

Salt, which renders posts more durable, may be applied by boring an inch hole, downwards, into each post, before the hole is quite filled with earth, putting in the salt, and plugging it in.

FARMER'S DUTIES TO THEIR CHILDREN.

Hartford County (Ct.) **Ag. Society.**—We have received the Transactions of this Society for 1843 and 1844. They contain much useful matter. A "Report on Blood Stock," by **Charles A. Goodrich**, gives, in our opinion, a very judicious view of the subject of improving our neat cattle.

The address delivered before the Society in October last, by **Ralph R. Phelps**, Esq., is really one of the most valuable productions of the kind we have ever seen. Whether we regard the subject matter, or the point and perspicuity of expression, it is, we might say, a *model*. We regret that the great press of communications, prevents our giving more than a brief notice. We must, however, find space for the following extract: Mr. Phelps observes—"It has been a source of complaint with farmers, that they cannot keep their boys at home; that they must leave the farm for a profession, a clerkship, a trade, or even a pedler's trunk or cart. This I consider a great evil, which demands a remedy."

After speaking of the causes of the evil, among which he enumerates false ideas of honor and respectability, "surly, morose, and scolding habits of parents," and "the rough, uncouth, and comfortless appearance of many farmer's houses and out-buildings," Mr. P. proceeds to point out a remedy as follows:

> "Let no farmer's wife think her children too good to labor; but, on the contrary, let her strive early to fix habits of industry. Let every mother teach her sons, that while labor on the farm is honorable, idleness, ignorance and vice alone bring reproach. And when this lesson is thoroughly impressed on the mind of her son, and corresponding habits are formed, that son will be likely to make an efficient man and a useful citizen, whether he be following a profession, or be engaged in the more safe and more pleasant pursuit of agriculture. But when the mother, without this lesson, and without these habits, undertakes to make her son a gentleman, she is far more likely to make him a loafer.
>
> "Let parents labor to give all their children a good education. Let the absurd notion, that a farmer needs no education, be banished from every dwelling. There is no pursuit, where intelligence, and a well cultivated, and a well disciplined mind is more necessary, than in the proper management of the farm. Let the mind be enlarged by a knowledge of history, political economy, and especially the sciences connected with agriculture. Let the young farmer enrich his mind by general reading. Let him thoroughly understand our political institutions; and be able to judge of his political rights and duties, without the aid of some demagogue, who had rather devote his time to watching over the public interests, than to the pursuit of honest industry. In short, let the farmer be able to reason, to examine and to judge for himself, and he will soon take the elevated rank in society to which his calling entitles him, and he will no longer have the opportunity of complaining that professional men have too much influence. This will have a great tendency to attach farmer's sons to their homes and to their farms."

PRODUCTIVE COWS.

A correspondent at Norwich (Mass.) informs us that "Mr. Joseph Kirkland of that town, has kept on his farm the last year, six cows; three of them calved near the first of March, the others the last of May. From their milk he has made 981 lbs. of butter; at 14 cents per lb., the price at which the most of it was sold, it would amount to $137,34. To which add the value of the skim milk, at $3,11 per cow, and the calves which were all raised, at $3 a-piece, at the time of weaning, and it amounts to $174,00, which will give to each cow on an average as the value of her product for one year, the sum of $29. The cows were raised on the farm, and are from 3 to 6 years old; their keeping has been grass and hay. One cow gave, during the first week in June, on one day, 40 lbs. of milk, and on the next day 38 lbs., from which was made 4 lbs. of butter, or 2 lbs. each day; her milk was weighed several times in the months of July and August, and was found to weigh from 35 to 37 lbs. a day."

LABELS FOR STANDARD FRUIT TREES.

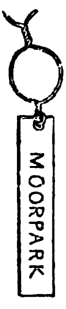


Fig. 35.

The owners of fine and valuable collections of fruit, are often very much at a loss, and serious inconvenience and mistakes often arise, from the want of permanent names attached to the trees. In our last volume, two modes of making labels, one of painted wood, the other of zinc, were described by correspondents. A third, a very neat and permanent label, is made of stamped lead as follows: An iron plate, A. fig. 36, about six inches long and an inch wide, is screwed on another plate, B. of the same length, and twice as wide, by means of the screws at the ends, turned by their button-heads. A piece of sheet lead, with a width equal to the intended length of the label, is inserted between these two iron plates, as shown in the figure, and secured firmly to its place by means of the screws. The letter-punches are then applied to the lead successively, the edge of the upper plate, which should be thin, preserving them in a true line. Steel punches are best, but common printing types will answer. The imprinted end is then cut off; a hole is made in one end, which is neatly and quickly done by a shoemaker's nipping-punch; and by means of a copper wire a little larger than a common pin, it is attached to one of the branches of the tree. The copper wire sho'd form a loop one or two inches in diameter, so as not to cut the branch by the growth of the latter. Iron wire will do, but is more difficult to bend than copper, and is more liable to break off. Fig. 35 represents the label as finished. The wire should be twisted first closely at the hole in the label, to prevent the lead becoming worn by its motion in the wind, and again twisted at the ends to form the loop round the branch. A side branch should be selected, as being less liable to out-grow the loop. The leisure of the winter season, is a good time for the performance of this work.

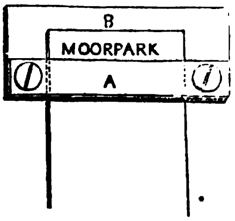


Fig. 36.

SUCCESSFUL CULTURE OF TURNEPS.

It is a fact, familiar to most farmers, that when the soil is heavy, newly cleared land is finely adapted to the raising of the common flat turnep; but that after a few years, this quality seems to disappear, owing chiefly, as is generally supposed, to the ravages of the turnep fly.

A farmer in the western part of this State. entirely obviates this difficulty by a very simple expedient. His farm is a heavy fertile soil, and though well adapted to most farm crops, it appeared to be entirely unfitted to the turnep, like all others of a similar character. The successful mode he adopted, is as follows:—After having plowed and harrowed his ground, and reduced it to a fine tilth, he spreads over the surface several inches of old straw, which is suffered to lie a few weeks. Just before sowing time, it is burned, the surface is harrowed, the seed sown and brushed in. In this way, he uniformly obtains the finest crops. He ascribes his success to the destruction of the insects by fire; but whatever may be the cause, the practice is well worthy of trial by all possessing land of a similar character

AGRICULTURAL MEETINGS IN ALBANY.

These meeting have been continued weekly from the first, on the 16th Jan. of which we gave a brief notice in the Feb. number. We have furnished full reports of the discussions for the daily papers here; but for our own pages we are under the necessity of greatly abridging them, in order to find room for a sketch of all in our columns.

At the second meeting, Jan 23d, the subject for discussion was

"The best means of advancing the Agricultural interest."

Mr. HOWARD, Assistant Editor of the Cultivator, after speaking of other causes of the depression of agriculture, and suggesting means for improvement, remarked that the prevalence of an inveterate habit of carelessness and negligence among farmers, in his opinion constituted a very great obstacle to improvement. Pass through the country, and we too plainly see the evidence of the existence and consequences of this habit. We see this in the neglected fences, badly arranged farm-buildings and barn-yards—and in the trees and fruits of the garden and orchard, destroyed by the caterpillar and curculio.

In offering a remedy for this, Mr. H. would proceed as he should do in attempting all other great revolutions: that is, he would begin with the *rising generation*. He would endeavor to enlist the feelings of the boy, at an early age, in the business of his future vocation—would induce him to bring the MIND to aid the hands in the prosecution of his labors. Teach him habits of observation and reflection. Especially induce in him the observance of systematic rules in the laying out and management of his business. Induce him to adopt as a motto, the advice of FRANKLIN to his young friend: "Lay down a little PLAN for yourself, and all your operations will become easy." Let him study the principles of his art—trace effects to their causes, and from well established truths be able to draw correct and useful inferences. Permit him not to imbibe the idea, heretofore too common, that the profession of agriculture is a menial drudgery, fit only for the ignorant and degraded; but show him that it is a noble calling, where the powers of the mind may find full scope, and in the study and practice of which, the mysterious and most beautiful operations of nature are unfolded to view.

Mr. H. would particularly encourage boys in reading books and papers on subjects connected with agricultural pursuits. The school libraries may furnish to all our youth an excellent medium for obtaining useful reading of this kind. Excite in them, if possible, a habit of reading books on natural history. Provide suitable rudimentary works on entomology and botany. As the boy studies these, stimulate his interest by permitting him to combine the knowledge there obtained, with his every day business. When, in his field labors, he meets with a worm, a moth, or a beetle, let him put it in a box carried in his pocket for the purpose. On returning home, he will find out its name and character, and give it its proper place in his entomological cabinet.

Mr. H. thought the establishment of a MODEL and EXPERIMENTAL FARM, under judicious management, would be a very effectual means of advancing the agricultural interest. He urged this matter with much earnestness, and advanced various arguments in favor of such an institution. Its great design and object should be the decision of doubtful points in husbandry and rural economy. There, the various breeds of animals might be subjected to an impartial test, and their relative value for specific purposes, fairly made known. Theories, deducible from experiments in the laboratory, are being every day thrown before the public. These, would there be subjected to the test of field culture—*nature's laboratory*—and without such tests, they could never become safe guides to the farmer. These points will never be decided by individuals acting in their ordinary capacity. Some persons are incapable of conducting experiments in such a manner that correct inferences can be drawn from them. Others cannot afford to risk time and money upon uncertain results; and others are so biassed in favor of some favorite theory, as to preclude the possibility of arriving at the true result of an experiment. An establishment conducted by competent persons, with a single eye to the development of TRUTH, would be liable to none of these difficulties or objections

The appointment of an *agricultural missionary*, or lecturer, Mr. H. said, would, as he believed, be an important auxiliary, in connection with other means, of advancing the cause of agricultural improvement. We may find in other countries an example in point. Mr. Blacker of Ireland, and Prof. Johnston of Scotland, have rendered very important services by their labors of this kind. It was not to be expected, perhaps, that an individual could be found for this business, whose opinions were in all respects so perfectly orthodox that no one could possibly make any objections to them; nor was it necessary that a lecturer of infallibility should be procured. The great benefit which would accrue from his mission and exhortations would be the stimulus given to study and investigation. Farmers would be aroused—they would devote their thoughts to their business—an examination would be commenced, to ascertain the truth of any new doctrines which might be promulgated; and the result could not fail to be beneficial.

Dr. D. LEE, of the Assembly, observed, that Sir Humphrey Davy had defined SCIENCE to be "refined common sense." Dr. L. thought the use of this "science," or this form of "common sense," would greatly advance the agricultural interest. He thought the farmer should be better educated—especially, that he should have more of that kind of knowledge which would enable him to reap a better return for his labor—would enable him to keep more of what he earns. Ten days' work of the farmer, Dr. L. said, frequently did not bring him more than one day's work brought the lawyer. He thought the diffusion of knowledge, of the *right kind*, would tend to equalise the value of labor—would advance the interest of the farmer, as well as the whole community.

The meeting was further addressed by Mr. BETTS, member of the Assembly from Rensselaer county, Judge LELAND, of Steuben county, Mr. McVEAN and Mr. YOUNG of the Assembly, and by Judge CHEEVER.

Judge C. thought the benefits of agricultural societies had been undervalued. It was a great misfortune to the agricultural interest, that farmers did not act sufficiently in concert. The people of other classes saw the benefits of association, and they so combined their forces that their action was felt. Their influence on the policy of government was obvious. Now he would arouse farmers to the importance of protecting their interests—he would have them united and firm in claiming of government their rights—the government should know that their voice is not to be unheeded.

At the third meeting, Jan. 30th, the question discussed was

"What Breed or Breeds of Cattle, are best adapted to the purposes of Farmers in the State of New-York?"

Mr. SOTHAM said he was an advocate of the Herefords. He believed they would make more flesh with the same expense than any breed in the country—that they would carry themselves to market with less loss; and that their beef would, from its superior quality, command the highest price. In selecting these cattle, he had done so from a conviction that they would prove more generally useful here, than any other breed in England. He had had frequent opportunities of examining all the breeds there, and thought he was acquainted with the peculiarities of each. He had been perfectly satisfied with the Herefords here; and he only asked a fair trial for them, to satisfy others. He however considered mere opinions as of but little consequence in regard to cattle; he therefore proposed to have the Herefords tried on their own merits; and for this purpose was willing to put three steers and three cows, to a trial with the same number owned at this time by one man, of any other breed, under such regulations as impartial individuals should deem proper. He made this public offer for no other purpose than to have a fair comparison made with various breeds.

Mr. DANFORTH, of Jefferson county, member of the Assembly, said he began breeding with what is called the native stock. About sixteen years ago, he purchased a Short-Horn bull of the late Matthew Bullock, of Albany county. The calves produced from this animal and the old stock, were much improved for dairy purposes—they were also better for fattening. He kept them as he had formerly kept stock. They were more tender in constitution—did not winter so well—were not quite so good for labor—their dispositions were more sluggish; but on the whole, they were more profitable by at least twenty per cent, than the old stock. Some years since, Mr. D. used a Devon bull in his herd. The cross from him on that of the Short-horn bull, had proved excellent. They are more hardy, require less food, fatten easier, are better for work, and are as good for milk. Their superiority for labor and fattening is quite obvious—for beef, the Devon cross is better at three, than the others are at four years of age. Both Durhams and Devons had improved his native stock; but he thought the Devon had benefitted him the most.

Mr. BEMENT said, within the last eighteen years he had had more or less experience with the Durhams, Devons, Herefords, Ayrshires, and natives, as they are called. He had found both good and bad milkers among the Durhams—generally speaking, the higher bred they were, the less valuable they were as milkers. But he was satisfied it was practicable to select from certain families of the Short-Horns, those from which a very superior breed of milkers might be reared—a race perhaps superior in this respect to all others. For his land, however, which was rather sandy and light, he liked the Ayrshires; and so far, was very well satisfied with them. He thought Durhams were better workers than had generally been allowed. He had seen them tried, and they did exceedingly well.

Judge LELAND, of Steuben county, said they had tried several breeds in his section—the Short-Horns, Herefords, and Devons, had all been there. Several years ago, Mordecai Hale, Esq., who was in some way connected with the U. S. Navy, sent some Herefords into that county; and perhaps he ought, in justice to the advocates of Herefords, to say that they proved the most generally useful of any stock they had tried. They were very hardy, were powerful in the yoke, and a decided improvement on the native stock, for the dairy. Comparing those Herefords with the herd owned at this time by Messrs. Corning and Sotham, he thought the latter showed that the breed had been improved in regard to a disposition to accumulate fat on the most valuable parts—the "*quality* pieces," as Mr. Sotham had called them; but while this had been gained, it was a question in his mind, whether they had not lost something on the score of muscular strength and constitution.

Judge L. remarked that his experience and observation had convinced him, that the *native* stock of this section would be improved either by the Durhams, Herefords, or Devons—that is, a cross from either of these made more *profitable* stock for general purposes.

The discussion was continued by Messrs. BETTS, HOWARD, STEVENS, and others.

The subject of discussion at the fourth meeting was

"The best mode of managing and applying Vegetable and Animal Manures."

No report of this meeting was made, but this was the less necessary, as the subject was continued for the fifth and sixth meeting, Feb. 13th and 20th.

At the fifth meeting

Dr. LEE opened the discussion by remarking that by the term manures, was understood any substance that might serve as food for plants. The food of plants was derived partly from the soil and partly from the atmosphere—from the soil by means of the roots, from the atmosphere by the leaves. If it be an organized substance, it must undergo decomposition. For instance, one spire of grass cannot enter into the composition of another spire—it must be dissolved. It is most important in the preparation of manures, that while this decomposition should be thoroughly performed, none of the manure should be lost. It is for this purpose that compost heaps are made.

They promote fermentation and decomposition, by which new affinities are formed. In the ordinary preparation of manures, large portions are dissolved and lost in the shape of gases—in consequence of exposure to the atmosphere. Other portions are lost by leaching —from want of shelter from rains and snows. This should not be so. They should be carefully sheltered, and the gases absorbed and retained by a covering of charcoal, peat, or other absorbing substance. In regard to the preparation, there were a great variety of opinions and practices. The first object, however, was to promote a decomposition. This was sometimes done by putting water upon the compost heap to induce fermentation; which generates much heat—especially in the winter. Compost heaps were also serviceable to absorb the liquid excretions of animals, which are liable to be washed way.

Mr. J. B. NOTT thought the farmer must rely mainly for the present and probably for some time to come, on the manures of the barn-yard. And it should be the object, in the first place, so to manage these manures that nothing may be lost. We should not allow its strength to be taken from it by frost and snow, to be drained off by rains, or dissipated by the winds. The fermentation of manures is often allowed to take place in such a manner that the most valuable portion is carried off, and it becomes nearly worthless. It has been well said that no farmer ever smelled his manure, without witnessing a waste of his property. The question had been raised in regard to the propriety of composting manures. It was the opinion of the late Judge Buel, and also of some other distinguished farmers, that the practice was useless. It was argued that the richness of the manure was lessened by fermentation. But there was one great disadvantage attending the use of long manure, and that was the seeds of weeds, &c., which would vegetate in the land and annoy the farmer. Fermentation in the compost heap would destroy most of these seeds—and cannot this fermentation be so conducted that no loss will accrue to the farmer? The "best method of applying manures," is an important question. He had had some experience, and had endeavored to observe the effects of different modes. He had come to these conclusions—that it was not proper to bury them very deeply, nor to leave them entirely uncovered. His soil was rather sandy, and plowing in manures to the depth of 6 or 7 inches had generally been attended with comparatively little benefit, but when they had been covered 2 or 3 inches, the greatest good had been produced.

Mr. SOTHAM agreed generally with Mr. Nott in regard to the mode of applying manures. But perhaps one reason why that gentleman had supposed there was but little benefit to be derived from plowing in manures, was, that he did not wait long enough for the manure to be decomposed. He thought plowing in long manures, for a tenacious soil, was highly beneficial. The soil is thus rendered more friable and adapted to the circulation of the roots of plants.

Mr. S. would briefly state his mode of managing barn-yard manures. He mixed various kinds together, in the following manner: First, he put down a layer of manure from the cattle-stalls; next, a layer from the horse-stables, and next a layer from the slaughter-houses—then the kind first used, and so on alternately till the pile was raised as high as convenient. In this situation it underwent a moderate fermentation, and when it was carted away for use, it was so cut down that all the various ingredients were mixed well together. He thought it very important that all animal manures should be saved, for they undoubtedly contained all the organic elements of plants—carbon, hydrogen, oxygen and nitrogen.

Mr. NOTT asked—"When is it best to apply manure to a corn-crop?"

Dr. LEE answered—when you plant the corn. The experiment spoken of at one of our meetings last winter, by Mr. Humphrey, the Mayor, was in point. He planted some corn on a very poor, sandy soil, with a small quantity of horn shavings in the hill. The result was that where the shavings were applied, he got 60 bushels to the acre, but where the shavings were not applied, he only got 15 bushels. He proposed to a friend of his last winter to soak his corn in muriate of ammonia. He did, and on a poor chestnut ridge he got 94 bushels of corn to the acre. There are certain salts necessary to the perfection of plants. Wheat contains phosphate of lime, without which it is imperfect. This substance escapes from animals in their urine. This should be preserved. It is probable that in this state there is millions of pounds of this phosphate of lime taken from the land annually. This loss must be made good, or the soil will grow poor. Seeds. Dr. L. said, should be steeped in those substances necessary to the perfection of the plant, before sowing.

Prof. EMMONS said he could not altogether agree with Dr. Lee in some points of vegetable economy. He, (Prof. E.) thought plants derived their sustenance almost entirely through their roots—the roots were evidently designed to take in the food of the plant—their spongioles were extended in every direction for this purpose. Leaves may be considered the stomach of the plant, where the food taken through the roots is digested. This is a question of practical importance, for if plants derive their nutriment from the atmosphere, then let manures be applied so as to ascend. It was possible that plants may absorb carbonic acid by their leaves; but was this their proper function?

Dr. LEE replied that he thought Prof. Emmons had misunderstood him—it was conceded that plants derive part of their food from the soil. The question was, how much? If we could know this exactly, we should know just how much manure to apply. It is clear that we must restore more than we take away. We were at present in the dark about this, but it was his impression that in taking off 100 lbs. in crops, 80 of the quantity comes from the atmosphere, which would leave 20 to be restored.

Professor HALL said different plants possess different powers. Some absorb more from the atmosphere than others. Take peas, for instance: the tops will remain green and flourishing, while an inch or two of the stalk near the ground may be nearly dried up. This shows that they absorb nutriment from the atmosphere. Besides it was known that plants flourish more luxuriantly in the vicinity of odors arising from animal and vegetable decomposition. A vine would move in the direction of a dung-hill, and flourish better if suffered to run over it. Some plants will flourish in pounded glass watered only with distilled water—others will grow without the roots being covered at all.

The President, Mr. PRENTICE, being called on, observed that the call had been unexpected, and he was not prepared with any data from which to give the information asked. He would state, however, that the peculiar manure alluded to, was the refuse of a fur-factory, and was composed mostly of the fatty substance, or blubber, adhering to the skins of seals, with portions of the skins and hair. Of this refuse, there was sometimes as much as three pounds from a single skin. Owing to the trifling estimation in which manures had formerly been held by the farmers in this vicinity, he experienced great difficulty in getting rid of this refuse. He had offered to give it away, and afford any facilities for loading it, &c., but strange as it may seem, the farmers would not take the trouble to cart it away, and he was actually under the necessity of purchasing a piece of land on which to deposit it. Its effects, as had been remarked, were quite remarkable. He had never seen so powerful a manure. He had applied it, with results astonishingly beneficial, as a top-dressing to his pasture grounds, but the effluvium from it when applied in that shape, was exceedingly offensive. He had mixed it with the sweepings of the streets, so as to absorb the gases; and for cultivated crops, he preferred to use it in this form, worked into the soil. For a top-dressing to grass, it was perhaps as well to spread it on without mixture. Where he had so applied it, the crop had been increased from one ton to three tons per acre. Care was needed lest too much should be applied. In one instance where it had been applied to a potatoe-crop, an enormous growth of vines was produced, some of them 8 or 9 feet long, but very few potatoes. On corn it had done well, when used in moderate quantities—giving, he thought, a third more than he had got by other manures. He had once applied it to his orchard, but put on so much that it destroyed about one-half his trees. He was unable to state, from recollection, the precise quantity he had used per acre in all cases.

NEW-YORK STATE AGRICULTURAL SOCIETY.

At a meeting of the Executive Committee of the New-York State Agricultural Society, on the 15th February, 1845, the following gentlemen were appointed

COUNTY CORRESPONDING COMMITTEES.

Albany—C. N. Bement, Albany; Joel B. Nott, Guilderland; Amos Crary, Knox.

Allegany—Alvin Burr, Laurens Hull, Angelica.

Broome—Dr. A. Doubleday, Binghampton.

Cayuga—J. M. Sherwood, Auburn; David Thomas, Aurora; Judge Hollister, Cato 4 Corners.

Chautauque—T. B. Campbell, Westfield; Samuel A. Brown, Jamestown; Wm. Risley, Fredonia.

Chemung—E. C. Frost, Catherine.

Clinton—Edwin Benedict, Plattsburgh.

Columbia—J. P. Beekman, Kinderhook; John S. Gould, Stockport; Abm. P. Holdridge, Austerlitz.

Cortland—Jedediah Barber, Homer; Dan. Hibbard, Cortland.

Chenango—Dr. Mitchell, Norwich; Isaac Foote, Smyrna.

Cattaraugus—Abraham Searl, Ellicottville.

Delaware—Cornelius R. Fitch, Delhi.

Dutchess—Thomas Swift, Amenia; Dudley B. Fuller, Hyde Park; J. W. Kneevels, Fishkill.

Erie—R. L. Allen, Buffalo; Augustus Raynor, Clarence; Ezra Chaffey, Boston.

Greene—A. Van Bergen, Coxsackie; A. Marks, Durham.

Herkimer—A. Loomis, Little Falls; A. L. Fish, Cedarville; Mr. Crane, Warren.

Jefferson—Charles E. Clarke, Albert P. Brayton, Watertown; William Ives.

Livingston—Jas. S. Wadsworth, C. H. Bryan, Geneseo.

Lewis—Ela Merriam, Turin.

Madison—Geo. B. Rowe, Canastota; S. B. Burchard, Hamilton.

Monroe—R. Harmon, Jr. Wheatland; Thos. H. Hyatt, Rochester; Abel Baldwin, Clarkson.

Montgomery—George Goertner; John Frey, Palatine.

Niagara—Wm. Parsons, Wm. A. Townsend, Lockport.

Orleans—Charles Lee, Barre; B. L. Bessar, Albion.

Orange—F. J. Betts, Newburgh; Robert Deniston, Salisbury Mills; J. W. Gott, Goshen.

Onondaga—Squire M. Brown, Elbridge; James M. Ellis, Onondago; Wm. Fuller, Skaneateles; Silas Chesebrough, De Witt.

Oneida—Elon Comstock, Rome; N. L. Wright, Vernon Center; Henry Rhodes, Trenton; H. B. Bartlett, Paris.

Oswego—H. E. Sanford, Volney; B. E. Bowen, Mexico; S. B. Ludlow, Oswego.

Otsego—Joseph Bennett; Henry Phinney, Cooperstown; K. H. Van Rensselaer, Butternuts.

Queens—A. G. Carll, Jericho.

Rensselaer—Wm. P. Van Rensselaer, Bath; John J. Vielie, Lansingburgh; Samuel Hoag, Nassau; Joseph Hastings, Brunswick.

Richmond—Dr. S. Akerly, Richmond.

Saratoga—David Rogers, Corinth; Seth Whalen, Ballston, P. O.; Howell Gardner, Greenfield.

Scoharie—Jedediah Miller, Cobleskill; Wm. Mann, Scoharie.

Seneca—John Delafield, Geneva P. O.; Samuel Williams, Waterloo.

Suffolk—John G. Floyd, Mastic.

Tompkins—L. A. Morrell, Lake Ridge; J R. Speed, Caroline; E. Mack, Ithaca.

TIOGA—G. J. Pumpelly, Owego; Chas. T. Johnson.

ULSTER—Lewis Bevier, Rochester, P. O.; Joseph Arnold, Kingston.

WASHINGTON—John McDonald, Salem; Asa Fitch, Jr.; Henry Holmes, Greenwich.

WESTCHESTER—Tyler Fountain, Peekskill.

WYOMING—James C. Ferris, Wyoming; A. W. Young, Warsaw.

MARCH 13.—At the meeting of the Executive Committee this day—present, Messrs. PRENTICE, MCINTYRE, HILLHOUSE, ENOS and TUCKER—Mr. PRENTICE, Vice Pres't, in the chair.

The Recording Secretary reported that he had received from F. ROTCH, Esq. the dies for Medals, ordered some time last year; together with samples of the Medals in gold, silver, gilt, bronze and metal—the account for which was audited and ordered paid. The design and execution of the medals were much admired.

A letter from L. F. ALLEN, Esq. on the subject of Premiums on Horses, was read, and its consideration deferred to a more full meeting of the Board.

A letter from Mr. ADAMS, relative to the Premium on Cornstalk Sugar, having been read, on motion of Mr. Tucker,

Resolved, That the offer of a premium for Cornstalk Sugar, be amended so as to read—"For the best 25 lbs. sugar, manufactured from the juice of the cornstalk, $25 —the premium not to be awarded, unless the samples offered, shall be deemed worthy of it."

The Committee on Diplomas were directed to have the Design for a Diploma, adopted at the December meeting, engraved on steel.

CULTIVATION OF FOREST TREES.

THE propagation of forest trees is becoming every year more important. In some sections they are wanted for ornament and shade, in others for wood and timber. There is a large portion of the western country, in which the natural destitution of timber constitutes a great obstacle to its cultivation—indeed, there are many districts which can never be much improved, until some substitute can be found for the forest. There is no reasonable doubt that those bleak prairies might, in the course of a few years, if proper care were used, be covered with various kinds of trees.

Of valuable kinds of trees which may be readily cultivated, there are the various species of maple, ash, oak, chestnut, walnut, pines, larch, &c.

In transplanting from the woods, it is not advisable to choose very large trees; we have found small ones preferable, as they more readily accommodate themselves to the change from a protected situation to the open air. *Evergreens* do best when transplanted in the fore part of the winter, when the ground is just so much frozen that the earth to the depth of six or eight inches will adhere to the roots, and by transferring them in this manner to their new location, there is much more certainty of their succeeding.

But the best mode of propagation is by seed. It is true, however, that a difficulty is often experienced in causing the seeds or nuts to vegetate. The principal cause of this difficulty, is owing to the nuts becoming too dry before they are put in the ground. The best course is, to plant them as soon as they fall from the tree. The seeds of the elm, and the white and red maples, (*Acer dasycarpum*, and *A. rubrum*,) fall early in the season. The blossoms put out before the leaves appear, and in this latitude the seeds generally fall before the middle of June. Attached to the pericarps or seed coverings, are thin fibrous appendages, (that of the maple bearing no small resemblance to the wing of an insect,) by which the wind disperses the seeds in different directions till they come in contact with earth or some object upon its surface, where, if circumstances are favorable, they vegetate. We have had some experience in rearing trees of these varieties. The seeds should be gathered as soon as they fall, and immediately planted. They may be sown as thick as we sow peas, in rows sixteen or eighteen inches apart, as they will occupy but little room the first year. The next spring they should be transplanted, in the same manner as apple-trees are, from the seed-bed.

The rock or sugar maple (*A. saccharinum*) does not drop its seeds as early as the white and red kinds do; they do not fall till autumn, and seldom, (perhaps never) vegetate till the succeeding spring. In the vicinity of old trees, the young ones may be found in great numbers, just as they appear above-ground, which is about the time the trees become full set with foliage. They may then be readily taken up with the spade and transplanted in the nursery. Care, however, should be taken to get, as far as possible, those young trees which have come up in the open air, as those taken from the shade will hardly bear exposure to the hot sun in their new location. Cattle and other animals greedily eat these young trees, and it is therefore not easy to find them, long after they first come up, in situations where stock range. But the best course with the suger maple, is that recommended for the other kinds and for elms: that is, to gather the seeds as soon as they drop, and plant them in the seed-bed, where they will be sure to vegetate early the next spring. The seeds of the white ash and catalpa may be managed in the same way. If maples are planted in good moist soil, their growth is rapid. We have had them ten feet high in three years, from the seed.

Nuts of all kinds, the haws of thorns, &c., should be planted as soon as they fall from the tree, or else should be put immediately in boxes of moist earth, and there kept till spring.

The yellow and black locust are easily propagated from seed. They are of rapid growth, and when not attacked by insects, are highly valuable for timber. The pods containing the seeds are easily gathered when ripe, and the seeds may either be planted the same fall, or kept till spring. If they lay in the ground during winter, they will vegetate the next season. If the seeds are kept dry, they will retain their vegetating powers a long time; but if it is wished to have them come up soon, it is necessary, just as they are planted, to pour hot water on them, to soften the hard skins and allow the moisture to strike to the germ. The honey locust may be propagated in the same way as the other kinds, but is less valuable for timber, though we believe it is never attacked by the borer, and is sometimes recommended for hedges.

In some sections of the country, particularly in the eastern part of Massachusetts, we have noticed plantations of the white pine. The cultivation of the pine is a matter of much importance in those districts. In early times, lands were in many instances brought into cultivation there, which from their natural barrenness have long since ceased to produce crops that would pay the cost. These old fields, by a little attention, may be brought profitably into wood, and their unseemly nakedness and sterility changed for ornamental groves.

We believe the seed of the pine is usually sown broad-cast, in the cases we allude to; we are not, however, much acquainted with the mode pursued, but presume it is necessary to gather the cones containing the seed as soon as they fall, lest the seeds should be lost, or picked out and carried off by squirrels.

Will not some of our friends in the "old Colony," or elsewhere, give us the best mode of cultivating the pine and other forest trees on worn-out lands?

We would call attention to an able and very interesting article—by a correspondent from whom we hope to hear again—on the culture of the *larch*, in this number.

ONIONS.—The average yield of this crop (in the county of Essex, Mass.) is 300 bushels per acre; sometimes as high as 500 or 600 bushels. The ordinary expense of manure and labor to an acre may be estimated at *double* that required for Indian corn; this estimate is believed to be ample to cover all that will be requisite for a series of years, especially when it is taken into view that much of the labor of weeding and gardening may be done by children. For ten years past, from 30,000 to 60,000 bushels in a year have been raised in the single town of Danvers. The average value of the crop when brought to market, is fifty cents per bushel, or $150 per acre. In what way can so fair a profit be realized from the land?—*Proctor's Address.*

REWARD OF INDUSTRY AND SKILL.

Our correspondent "INDICATOR," gives some interesting facts in regard to the success of a man, who, under many discouragements, bought a farm of seventy four acres near Buffalo, about twelve years since. The man was an Englishman by birth, though he was not brought up to farming. At the time he bought the farm, it was thought so poor that while commencing operations, and making his garden, his neighbors told him he was throwing away his labor, for the land could not be made to produce anything. In purchasing and paying for the land he was forced to encounter serious difficulties and to forego many comforts. We are informed that he even had to trade away his watch to get a wagon, and his cloak or over-coat to get a part of a stack of hay, to feed his team upon before grass could be grown. But under all these discouraging hardships, he perseveringly continued his efforts, which have at last been crowned with success equal to his anticipations. "He harvests" (it is said) "as good crops as any one, and much better than many of those who are in possession of farms called the *best*." To the original seventy-four acres for which he had so hard a struggle to pay, he has added fifty more, giving him a farm of 124 acres, which we are told is all paid for, and that he has built on it one good frame barn, has cleared off the logs, stumps, and stones. His fences are said to be better than on most farms, and he is making experiments with live hedges. He has a flock of two hundred sheep, which it is said have been so much improved by a buck of the Leicestershire breed which he bought several years ago, that for three years in succession he has carried the first prizes for bucks of that kind, at the county show; and people come from a great distance to buy his young bucks. He has "nine head of cattle; a pair of fine stout mares; pigs and poultry; more and better tools than most farmers around him; with several hundred dollars out at interest!!

"Indicator" informs us that his neighbor, besides doing all this, "has always kept his children at school, summer and winter."

In conclusion "Indicator" says—"I fancy I hear some incredulous one say—'You tell us how well your neighbor has done, but you do not tell us *how* he has done it!' I answer, he has been constantly industrious and careful, and has observed the maxim of Dr. Franklin, published in his "Poor Richard" almanac—"Always spend something less than thy clear gains!" Lastly, we are informed, that "*he has for several years been a subscriber to the Cultivator*."

FAT ANIMALS.

WE noticed the carcasses of some remarkable cattle, sheep, and hogs, exhibited in the Centre Market in this city, on the 22d of February. There was the Durham ox, not quite six years old, which received the first premium on fat oxen at the Poughkeepsie State Show, bred and fatted by D. D. CAMPBELL, Esq., of Schenectady, which weighed as follows:

Live weight,	2,546	lbs.,
Beef—four quarters,	1,726	"
Hide,	121	"
Loose fat,	255	"
	2,102	lbs.

A spayed heifer, between four and five years old, bred and fattened by P. N. RUST, of Syracuse, weighed—

Four quarters,	1,226	lbs.,
Hide,	84	"
Loose fat,	180	"
	1,490	

This remarkable animal was said to have descended on one side from some cattle imported from Holland, several years since, by Mr. Linklean, of Madison county; but her fine bone, symmetry, and color, strongly indicated a mixture of Durham and Devon blood. We believe that she had always been kept in the stable; and we would suggest the query, whether this circumstance had any influence in lessening the weight of the hide? which it will be seen was of uncommon lightness.

Among the sheep, we noticed the carcass of a cross-bred South Down and Leicester wether, bred and fed by P. N. RUST; the neat weight of which was 183 lbs. —or over 45 lbs. per quarter.

All the above animals were exhibited at the stalls of KIRKPATRICK & Co.

At the stall of MCGUIGAN & WALSH, we observed the carcass of a Cotswold wether, weighing 172 lbs., fatted by Mr. KNICKERBACKER, of Schaghticoke. This was a most extraordinary carcass of mutton, exceeding anything we had before seen in weight, in proportion to bone.

But the greatest wonders and curiosities were in the *Pork* Department. Mr. G. SWARTZ exhibited the carcasses of three hogs—one of which, 2 years 7 months old, weighed 975 lbs! Another—of the Berkshire breed, a well-formed and symmetrical animal, 2 years 3 months old, 725 lbs. Another, ten months old, showing much China blood, 400 lbs., as perfect a pig as could well be imagined. The largest hog was said to be of the "Byfield breed," but it is evident that the blood of some larger and coarser breed must have predominated.

It may be interesting to compare the weights of these animals with some which have carried prizes at shows in England. The London Farmers' Journal gives the weights of some of the prize oxen, sheep, and pigs, which were exhibited at the last Smithfield Show. Of the cattle, the weight of the beef and loose fat or tallow only is given. A four yrs. old Durham ox—

Quarters,	1,768
Loose fat,	192
	1,960

A four years old Hereford ox—

Quarters,	1,590
Loose fat,	192
	1,782

Another Durham ox four years old, weighed—

Quarters, only— 1,840 lbs.

The weight of Mr. Campbell's ox—compared with, these—that is, the beef and tallow only—was 1,981 lbs. —but there was a difference of near two years in his favor.

The weights of no Cotswold or other long-wooled sheep are mentioned. A South Down wether, bred by the Duke of Bedford, weighed 172 lbs—or 43 pounds per quarter.

WHEAT CULTURE.

Mr. W. ORCUM of Maryland, after proposing some inquiries in regard to the best mode of manuring the land for wheat, gives the following as his own management: "My plan has been to break my fallow fields before harvest; stir it after harvest; spread manure, and harrow it, then sow two bushels of wheat per acre, then harrow and cross harrow. I use three horse plows and three horse harrows, and plow about ten inches deep. Some farmers spread the manure first, and plow it in, and use the shovel plow to put the wheat in. I have tried this plan, but prefer the other. As to my pasture fields, I sow in March or April, 1¼ bushels ground plaster per acre. Some persons consider so large a quantity injurious to the land; but I have never found it so. But on the contrary, my clover crops have been remarkably fine, and I have attributed it entirely to the plaster. In the spring of 1843, I sowed in "a 35 acre field," 1½ bushels plaster per acre, (which had been pastured for two years.) In the summer of 1843, it was pastured again, and after harvest, I had it broken up with a three horse plow, spread manure and harrowed it; sowed 69½ bushels wheat, which was harrowed and cross harrowed. This was seeded Sept. 28, 1843, and harvested July 1st and 2d, 1844. The wheat weighed 63¼ lbs. per bushel, and I think there was from 27 to 30 bushels per acre. Whereas, in a field of 85 acres, I pursued the other plan. I did not sow any plaster, but manured with barn yard manure, spreading it before plowing, and plowing it under. I had the wheat put in with shovel plows; and although the soil was better, it did not produce more than 20 bushels per acre. I should like to have the opinion of others upon the subject."

HEATING CONSERVATORIES BY HOT WATER.

We visited in February last, the the neatly-managed conservatory of Mr. James Wilson, near this city. Among other objects of interest, we particulary noticed a mode of heating hot-heuses by hot water. A boiler is placed at one end of the room, and a copper pipe, four inches in diameter, is inserted in it; carried from thence around one side of the building, connecting at the farther end with a vat or reservoir. From this reservoir. another pipe of the same size as the first, is carried back to the boiler, and inserted into it about six or eight inches above the other. The two pipes are placed vertically to each other, observing the same distance between them as at their connexion with the boiler. As the water in the boiler is heated, it rises, the colder water of the pipe flows in at the lower insertion, giving place to the warmer, which flows out at the uppermost insertion, thus keeping up a regular circulation till the whole is heated. The smoke-flue is carried round the room in the same manner as formerly; thus using to the best advantage, all the heat which is generated by the fire.

The largest of Mr. Wilson's houses is heated by one of these boilers with the pipes as described. The house is forty-three by twenty-seven feet, and 15¼ feet high, with span roof, both sides of which are of glass. Two boilers, each with pipes, were first provided, but one has been found amply sufficient, even in the coldest weather of the past winter. The cost of the two was $150, but as one has proved to answer, the whole cost of the necessary apparatus for heating the house is actually only $75.

COMPOSOTION OF SALERATUS—CURING MEAT.

We have received a long communication from "C. D." (on which fifty cents postage was charged us,) whose object is to show that saleratus consists largely of *sulphate of potash*, with bi-carbonate of potash. He quotes Thatcher's Dispensatory, who states that pearlash, (the basis of saleratus,) contains "a considerable proportion of foreign salts," which C. D. affirms are almost entirely *sulphate of potash*, as may be seen from his prescription for purifying them—by driving off the sulphuric acid by the heat of a crucible." Now it happens that sulphate of potash, according to chemists, decrepitates, but is not decomposed by heat. Hence this reasoning fails. He also says, so large is the proportion of sulphate of potash, that "the *potash maker* invariably uses *lime* to clarify his ley from the sulphuric acid." Now, it happens again, that sulphuric acid has a stronger affinity for potash than for lime; hence lime cannot decompose it. And hence, too, this reasoning fails. Our correspondent must excuse us for not publishing his reasoning at length, as a few accurate analyses of saleratus, which, so far as the presence of the sulphate is concerned, is one of the simplest operations in chemistry,[*] will settle all disputed points much better than any abstract reasoning.

Most of the cases which C. D. gives of the supposed efficacy of sulphate of potash in curig meat, are from the use of the mixture of common salt and wood ashes, the latter being supposed to consist largely of sulphate of potash. Admitting this to be so, the use of salt at the same time destroys the distinctive result of the experiment. But one experiment related is of a different character, which is as follows:—"Twenty-five years ago I had a quantity of pure sulphate of potash; I gave some to a friend, who cured his hams with it to his most perfect satisfaction. It imparts to them as much tenderness, and the same redish appearance which saltpetre does. In fine, the sulphate of potash has, in curing meat, all the good effects that saltpetre has, without its bad ones." [resulting from the poisonous nature of saltpetre.]

Human Blood.—Iron is found in venous blood alone, and no where else in the human body.

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[*] See Draper's Kane, p. 469; and Macnevin's Brande, p. 339.

ANSWERS TO INQUIRIES.

String Halt.—A "Subscriber" at Shoreham, Vt., inquires whether there is such a disease as "Spring halt." We presume the disease in question, is what is described in British works, as *string halt*. It exhibits itself in an involuntary twitching of the hind leg. Mr. Youatt says it is evidently an affection of some of the nerves which communicate motion to the muscles of the leg. "It is," says Mr. Y., "an irregular action of nervous energy; but what particular fibril is affected, or what muscle is chiefly spasmed, has never been ascertained. It is principally observed when the horse first comes from the stable, and gradually ceases after he has been exercised awhile." Mr. Y. observes that "the precise nature of the defect has never been determined, nor has any cure for it been discovered."

Pomegranate Melons.—Messrs. Gibson & Richie, Seedsmen, Newark, N. J., in a late letter, say—"In your January number 'W. of Troy,' inquires 'whether there is a species of the Muskmelon, called Pomegranate.' There is. It is about the size of a goose's egg, but more oval, and is worthless as a table fruit. It has, however, a most exquisite perfume, and one placed in a room, scents the whole air like a collection of the finest fruits. We never heard of the Citron Watermelon being used for any thing but preserves."

Tobacco.—In answer to the inquiry of Mr. Young, of Fallstown, North Carolina, we cannot at this time do better than to refer to an article on the culture of tobacco published in our last volume, page 84.

☞ We cannot answer the inquiries of "Indicator" in regard to Wiard's Gang-Plow. He had better address Mr. Wiard, at East-Avon, N. Y.

"How much is a 'load' of Manure?"—A friend at the south asks us this question, and though it is a perfectly proper one, it is rather hard to answer. The term "load," is probably about as indefinite as "a piece of chalk." The officers of the Mass. Ag. Society, in using the term "load of manure," in connexion with some of their premiums, explain it as "meaning not less than 30 bushels." Perhaps this quantity (30 bushels,) may be considered as good a criterion as can be given of what is commonly understood by the word load when applied to manure in this section. Our correspondent suggests that it would be a great convenience to express by bushels, what is always meant by loads. We recommend the suggestion, being satisfied that it would effect an important improvement.

South Down Sheep.—In regard to the value of the South Down breed of sheep "compared with the Merino and Bakewell," about which Mr. Boyd inquires, all depends on the purpose for which the sheep are wanted. The flavor of the South Down mutton is considered very superior—the wool of medium quality, for short wool—average three to four pounds per fleece. The Bakewells or Leicesters, fatten very easily, and at an earlier age than others—wool suitable for combing or the manufacture of worsteds—average four to six pounds per fleece. The South Downs are considered more hardy than the Leicesters and Merinos. The South Downs can be bought of Messrs. Bement or McIntyre of this city, of Messrs. S. & J. Wait, Orange county. We do not know of any Bakewells or Leicesters for sale, that are unmixed with the Cotswold, and it is the impression here, we believe, that they are benefited by the cross. The Cotswolds, or crosses of these and the Leicesters, may be had of Messrs. Corning & Sotham, McIntyre, Merrifield, and Dunn. The prices are from $12 to $30 per head, according to quality.

Wm. Battaile, Esq. of Benton, Miss., asks what grasses are best adapted to his section of country, and whether clover would succeed there. Not being personally acquainted with that region, we beg to refer our correspondent to our friend Mr. Affleck, of Washington, Miss., who is in all respects well qualified to give the information desired. As to corn sown broadcast for fodder, we should think it would do well. The usual time of planting, is proper for putting in the crop for this purpose. From two to three bushels seed are here used per acre, and it may be worked in with a cultivator, or what is better, turned in with a small plow. Some prefer planting it thick in drills, about three feet apart, in order to give a chance of working among it and keeping down the weeds and grass. The growth is thus made more rapid, and some who practice it, assure us that the yield is as great, and on some soils greater than when sown broadcast. The best mode of curing, we think, is to cut it shortly after the blossoms fall, bind in small bundles close to the top, and set in small stooks or shocks, as open as possible at the butts, and so tight at the top as to turn off the rain. Let them remain in this situation till thoroughly dried, when they may be removed to large ricks, or put in a barn. As to the cheapest and best means of improving lands in Mississippi, stopping "washes," &c. we would refer to Mr. Affleck or to Dr. Phillips. Without a knowledge of the facilities for improvement, it is impossible for us to say what course would be cheapest or most expedient. The gullies or "washes," may be stopped by throwing in small stones, brush, or small trees with the limbs on, and covering over with earth, taking care to prevent as much as possible, the water from entering into the old channels.

Spent tan and saw-dust.—In regard to the inquiry of Mr. Andrew Bush, Coventry, Pa., we remark that tan has been found useful as manure, particularly for trees and shrubbery, after it has become well decomposed. It is also sometimes used in a fresher state, to keep up the heat in hot beds. Saw-dust has been found very useful in ameliorating heavy or clayey soils. It makes also good bedding for horses or cattle, and when put in their stalls, is a convenient absorbent of urine.

Windmill.—Mr. William Wadsworth of Middlesex county, Conn., inquires for a windmill that would be effective for threshing, sawing, &c. In our last volume page 202, we noticed a model of a windmill invented by George Parker, of Corinna, Penobscot county, Maine, which we thought simple and cheap. Further information in regard to it, we presume could be had by addressing Mr. Parker.

Mangel Wurtzel.—H. Boyd, Wilkinsburgh, Pa., asks some information in regard to mangel wurtzel. The best soil for this root, is a rich light loam. The usual time for planting corn may be taken as proper for planting this crop. It is frequently sown on ridges, two to three feet apart, and thinned to a foot or more in the row. If the soil is likely to suffer from drouth, it is best not to ridge it. The roots may be fed, cut in proper slices, to milch cows, at the rate of half a bushel to a bushel per day, being careful to allow plenty of hay or other dry fodder, lest the roots too much relax the cows.

Virginia Lands, &c.—A correspondent, signing "Franklin," Washington, D. C., inquires for a remedy against the worm that eats the ends of the ears of green corn, or "roasting ears." He describes the worm as of a "green or grey color, from half an inch to two inches long." He says they frequently eat down the whole length of the ear—that "upon examination, there will generally be found a little hole perforating the husk, through which the worm made its ingress, or where the husk was punctured by a bee or insect for the purpose of laying an egg for producing the worm."

"Franklin" thinks more of the Northern hard-working farmers, with small means, might go to Virginia to their advantage. Land, which only requires good management to produce abundant crops, he says, can be had in Fairfax county, or on the Baltimore and Washington railroad, for from $10 to $30 per acre, according to the quality, situation, buildings, &c. In regard to the state of society, he observes—

"In Virginia, the New Englander will find the richer class of farmers more open-hearted, more courteous and polished in manners; and the poorer class more ignorant, and more coarse in all respects, than those he left. He will find less schools, less churches, and lose something of the quietude of the Sabbath; while in these respects, he will probably be better off, than by removing to the West."

Our correspondent at West Greenfield, "H. G." will find our views, together with the views of some others, on the subject about which he inquires, in this paper.

POTATOE ROT

We give the following from a letter from Hon. John Crary, of Salem, in this State. His suggestions are worthy the consideration of our farmers:

"The Cause of Rot in the Potatoe, and the way to prevent it.—The rot in the potatoe occurs in hot, dry seasons, and the heat and drouth prevent the ripening of the potatoe, and disease and decomposition follows. I observed during the last summer a difference in the potatoe crop, on the same land. Those potatoes that were covered deep were good as usual; those the covering of which was shallow were useless, particularly for the table. The first symptom of failure is in the stalks of the potatoe; they become dry and the leaves turn black, the growth then ceases, and the potatoe becomes rotten before it is ripe. The fibers that connect the stalk with the potatoe quit their hold, and when you grasp the stalk and pull with a view to raise the potatoes out of the hill, the roots break and leave the potatoes, or rather slip out of the hill without raising the potatoes."

Mr. Leroy Patillo, Monroe, Georgia, writes us that he thinks the rot is caused by small insects, and advises rolling the seed-potatoes in sulphur before planting them. He informs us that he has used sulphur with good effects around plum trees in which insects had perforated the bark, and from which the gum oozed out.

From a letter received from Elisha Hammond, of Conesville, N. Y., we extract the following facts in relation to the rot in potatoes. 1. "On dry, cool land, not very rich by putrescent manures, the crops almost entirely escaped." 2. Defective potatoes fed to hogs, in connexion with sulphur and charcoal, have produced no injury. 3. In a field of potatoes, some of the rows crossed places on which stumps had been burned, and other rows a spot where potatoes had been buried the year before, and the straw used about them turned under for manure. The crop was much more rotted on these places, especially over old potatoe-holes, than elsewhere. 4. Lime has been said to be a preventive of rot. It proved *not* so in this case. Some coarse lime had been spread on a part of the field. Some hills, where the lime happened to be scattered, were particularly examined, and found much more rotted than where nothing was put. 5. Plaster was used on most of the crop. Two rows were left through the field without plaster—no difference could be discovered between these and other rows, in the condition of the potatoes.

EXPERIMENTS IN THE USE OF POUDRETTE.

Mr. Tucker—I send you the following practical facts in relation to concentrated manures; a subject which is now commanding very general attention. I have selected these reports from distant parts of the country, that it may be seen that their effects are alike beneficial on different soils, and in somewhat different climates.

The first statement is an extract from a letter written by Augustus Shriver, Esq., of Carroll county, Md., dated November 22, 1844.

"I therefore mixed the poudrette with an equal quantity of ashes, and a little plaster, and when the corn was cleverly up, applied about a gill to each hill, leaving twelve rows in the field, to which I gave the same quantity of ashes and plaster *alone*, as has heretofore been my custom. The corn all grew finely, and there was no perceptible difference in that on which the poudrette had been applied, until the month of July, when we experienced a very severe drouth, lasting about six weeks, when the part dressed with ashes and plaster alone suffered somewhat and "fired" a little; but the balance on which I put the poudrette, held its own admirably, and did not "fire" a single blade, and looked flourishing and filled finely. I candidly believe that the poudrette, though so small a quantity, increased the yield at least ten per cent, and am so well pleased with this small experiment, that I will go into it on a larger scale next season."

The next report is from Mr. Floyd Howell, residing in the county of Onondaga, in this State—to whom nineteen barrels, or 76 bushels, were sent late in November

1843; upon which a freight of $1.37 per barrel was charged, which increased its cost to $2,87 *a barrel* on the farm. In reply to inquiries made in relation to its effects, the following answer is given, viz.:

"We took five acres of wheat-stubble which we supposed would yield, *without any manure*, from 35 to 40 bushels of corn to the acre; plowed and harrowed it once, the fore-part of May; then marked it out in rows four feet apart, but owing to the cold weather, did not plant until about the 16th of the month, when we dropped a handful of poudrette in each hill—or 14 barrels to the five acres—then planted it. After it came up, and *before the first hoeing*, we put 4 barrels more upon about *one half* of the field. The corn was hoed three times—and was ready to harvest a little earlier than our neighbors—but we could not perceive any *material* difference between that part of the field where the four barrels were applied as a top dressing, and the part where it was applied *only on the hill*. There was no other manure used than the poudrette. The *average* yield upon the five acres, was 80 bushels to the acre; but from one acre selected, we gathered 99 bushels and 18 pounds. The freight on the 40 barrels sent by you this year, will not exceed what was paid last year, $26 on 19 barrels, owing to its being shipped near the close of navigation."

From this it will be seen that, by the use of 18 barrels of 72 bushels of poudrette on the five acres, the yield was increased from 35 or 40 bushels, to eighty bushels, per acre, or over 200 bushels on the field.

Mr. Robert Henry, of Cranbury, N. J., says, under the date of Dec. 27th, 1844, that—

"For the last four or five years I have used poudrette with uniform success, on corn; and find it to answer on that crop, better than *any other manure* that I use. The corn, where it is used, is generally of a better color, and comes to maturity earlier, than where other manure is used. My mode of applying it, is in the hill; the ground being previously prepared with about 40 or 50 bushels of lime to the acre. This is the only way in which I have used it; and last season the corn was on a dry soil—although the season was also dry—the crop of corn was good, where poudrette was used. I consider it a cheap and profitable *manure*."

Mr. Peter Hall, of Norwalk, Conn., informs me that he "used poudrette in the fall of 1842, *with barn-yard* manure, on a field of wheat. The result was extraordinary—yielding *thirty-two and a half* bushels, weighing over 64 lbs. per bushel—to the acre. He also used it on corn the past year, 32 bushels, or 8 barrels, per acre. Part of it was put in the hill at planting, and the balance was spread on the surface previous to the second hoeing. The corn was planted a week *later* than his neighbors planted theirs, and was fit to harvest *nearly* two weeks earlier; and it was believed from the appearance, the produce was greater than upon any other field in the neighborhood.

On potatoes, also, its effects were remarked by every one who saw them. Those manured with poudrette could be distinguished from those treated with stable manure, as they passed along the road; and on digging them, very few, if any, were found diseased."

The poudrette used by the gentleman whose reports are herewith given, was obtained from the NEW YORK POUDRETTE COMPANY, and prepared in this city, by

New York, February, 1845. D. K. MINOR.

CEMENT FOR EARTHEN PIPES.—A mode of cementing earthen pipes for conveying hot water, is given by a correspondent of the London Gardener's Chronicle, as follows: Take one pint of sweet milk, nearly two pints of buttermilk, mix the milks, and put them on a slow fire till they turn into curd; then strain them and save the curds. Previously get some good roche lime, pound it fine, and sift through a fine sieve. Mix the lime with the curd well, until it is tough, and then dilute the joints of the pipe well with it; the pipes should be dry when the cement is applied. It will be sufficiently hard in a few hours, and it is said will not be affected by hot water. More cement than can be used in half an hour ought not to be made at a time, as it will get so hard as to be unfit for use.

CONDENSED CORRESPONDENCE.

HORTICULTURAL ITEMS.—Mr. CHAS. HAMILTON, of Canterbury informs us that a Rhode Island greening tree in that village, produced in 1843, twenty barrels of apples—that two trees, of which this is one, have for several seasons, produced twenty-two to twenty-three barrels suitable for market, besides what previously fell off. Mr. H. also informs us that the fruit of a single apricot tree, belonging to William T. Titus, of that village, sold in August last, for $12,55—being one cent each. The fruit of another tree belonging to Delaplain Gaunt, brought $17.

Strings for tying buds, &c.—Mr. Hamilton gives the following directions for preparing the bark of the Bass, or Linn tree, for this purpose—"About the 20th of June, cut the bark in strips about four feet long, which will make three lengths. Tie it up in bundles, and place it in clear running water, with stones on it to keep it down. In about four weeks, from six to ten courses of the inside bark will readily strip up finely. Having taken off this, put the rest back, and in three or four weeks more, it will again peel. The finest may be used for budding trees, and the coarser for tying trees to stakes, &c. The bark may be taken from the trees whenever they will peel."

In regard to the "*small brownish worm*," which Mr. Hamilton speaks of having eaten the buds from his plum trees, we know nothing, and without seeing the insect, or obtaining a more definite description, we can give no information in regard to it.

PROPER DEPTH OF COVERING FOR PEAS.—"Indicator" gives the result of an experiment which throws some light on this point. He plowed in some peas with a wheel attached to the plow, so regulated that the furrow was only three inches deep. Just before he had done plowing, the wheel came off, which permitted the plow to run the usual depth. He noticed that where he plowed after the wheel came off, the peas did not come up well—in some instances there would be a space of several yards without any.

CORRECTION—PREPARATION OF MUCK.—In our notice of Mr. Camp's method of improving land, in the February number, it seems we made a mistake in substituting the word "if" for "of." Thus in the preparation of peat or muck, Mr. Camp is made to say he would advise mixing one bushel of lime, two bushels of ashes, four bushels of crushed charcoal, &c., with one load of peat: whereas it was only intended to recommend *one* of these articles in the quantity mentioned, instead of the whole of them. Mr. Camp says he does not suppose that *all* these ingredients would "*hurt* a load of muck," but it was his aim to direct to a cheap, as well as good mode of improvement;" and he thinks "if the peat or muck be thrown from the bed and well frozen through the winter the quantity mentioned of either of these ingredients will serve as corrective for one load." In the note just received from Mr. Camp, he speaks of the use of "charred cobs" as follows:—"I have, for years made use of charred cobs and find them to be one of the best absorbents, drinking in the dews and other liquids, and disposing of them to the great benefit of plants. If I have oyster shells which I wish to char, I place a thick coat over the cobs, then cover well with dirt; this holds the gas while burning, and is a benefit to the whole. My kilns have generally been made partly of wood."

AGRICULTURAL PAPERS.—The following extract from a letter received from a correspondent at East Hartford, Conn., sufficiently explains itself, and needs no comment: "In perusing the December number of the Cultivator, I saw a notice requesting subscribers to act as agents, and being desirous to extend the circulation of so valuable a paper, I called on one of my neighbors and asked him to subscribe. He said "no, I cannot afford it—I've purchased five hundred dollars worth of land this year, and every cent counts.' Now if this man had spent his five hundred dollars in enriching what land he already had, I think he would have been better off. I next called on another neighbor, and while showing him the size and quantity of reading matter in a number, I heard a voice from another room, which I supposed to be that of the good (?) housewife, saying 'if a farmer can't take care of his business without an agricultural paper to tell him how, I think he had better give up.' Now this man takes so good 'care of his business,' that he loses half a dozen creatures of some kind or other, in the course of a year. But enough of this. I have obtained several subscribers to your paper."

Heaves in Horses.—"A. S.," Lebanon, Cobb county, Georgia, gives us some remarks on heaves in horses. The article which he speaks of having seen in a "miscellaneous newspaper, credited to the Gultivator," we cannot find, though it may have been in some of our preceding volumes.

"A. S." thinks the heaves are usually brought on, in his section of the country, by confining the horses too much on bulky food, such as corn-blades, (cured leaves,) straw, &c., and, especially feeding these articles in a musty, or badly cured state. After having had much experience in feeding horses, he has adopted the following rule, which we quote in his own words:

"My rule is now, for every 24 hours, according to work, from 6 to ten quarts of corn, as near as we can come to it, on the cob, and never more than four sheaves of fodder, averaging 2 lbs. each; and when I am preparing for, or on a journey, on which I expect to drive rapidly, I come down to about four pounds of fodder in 24 hours, and as much corn as the horse can eat clean; and I am not afraid of watering, directly from the plow, on the hotest day, or putting to his feed as soon as I stop on a journey."

"**A Country Typo**," says—"One of your correspondents in your January number, complaining of the neglect of farmer's interests, asserts that they meet too little attention and support from the country press. No doubt the local papers are too much engrossed by politics—but if politicians only support the paper, the editor must be expected to devote himself chiefly to their service. Does your correspondent himself take and pay for a country paper? and do his farming neighbors generally do the same by their local press? If not, he has no cause of complaint. It will be time enough for that when the editor proves unfaithful to the great mass of his patrons and neglectful of their interests. The truth is, that farmers are to blame for not supporting the country press. Let every man who owns a farm, subscribe and pay for the nearest journal, and they will soon have newspapers able and ready to furnish matter to their tastes, and advocate their interests."

Necessity for Inquiry.—Extract from a letter received from A. Wiltse, Esq. Adamsville:—"The farmer has more need than ever, (under the present times,) to ascertain the best means of enriching his soil—the nature and adaptation of the different manures to the different soils—the extent to which labor saving machines can be introduced into his business. In short, to learn how to produce the most and best of every thing, with the least possible expense or labor. How mistaken are farmers in their notions of policy and pretended economy! There are thouzands of farmers that might get some useful hints to store their minds with, these long winter evenings, if they would take an agricultural paper. Knowledge, if put in practice, would be a benefit to them in after life, and would increase their power and means of success."

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Wages in Derbyshire in the 14th Century.—It is sometimes thought that the condition of the laboring classes in England, is worse in modern times, than it formerly was. The following, which we copy from a late English paper, seems to teach a different view of the case:—"By an act, called the Statute of Labourers, 25th Edw. III., passed in 1351, it is provided, 'That no carter, plowman, day or other servants, shall take in the time of sarcling, or hay-making, but a penny the day; and mowers of meadows for the acre five pence, or by the day fivepence; and reapers of corn in the first week of August, twopence, and the second threepence, and so till the end of August; and less in the country where le[illegible] be given, without meat or drink or oth-

NEW PUBLICATIONS.

Report of the Commissioner of Patents.—We are indebted to Hon. H. L. Ellsworth, for a copy of his annual report for the year 1844. The statistical information embraced in this document is varied and extensive; but we have not yet had an opportunity of making a thorough examination of all the articles. From the tabular estimate of the crops for the last year, we gather the following in regard to the total products of the U. States. Whole number of bushels of wheat, 95,607,000; barley, 3,627,000; oats, 172,247,000; rye, 26,450,000; buckwheat, 9,071,000; Indian corn, 421,953,000; potatoes, 99,493,000; hay, (tons,) 17,715,000; flax and hemp, (tons,) 22,800; tobacco, (pounds,) 151,705,000; cotton, 872,107,000; rice, 111.759,000; silk, 396,790; sugar, 201,107,000. We find no estimate of the amount of wool produced last year.

Among the discoveries of the age, the Commissioner mentions the electro-magnetic telegraph, as one of the most brilliant—an invention which he thinks is destined, by the rapidity of transmitting intelligence, to essentially affect the welfare of society.

In regard to the progress of agriculture, it is observed that it has now become a science and study—that "worn out lands that have been as it were, abandoned, are now being reclaimed under scientific treatment. Guess-work and hereditary notions are yielding to analysis, and the application of chemical principles. * * * The prejudice against book-farming, is happily more and more passing away, though there is still too much of it remaining; but compared with some twenty years back, there is a vast deal more information of this kind possessed, than formerly. The consequence is, that as information is more diffused, the minds of the farmers are set in action. Many become contributors to the agricultural journals; and the value of these latter is much heightened by the increased practical bearing they assume, and the extent and variety derived from these sources. A comparison of these papers at the present day, with those published some twenty years since, will show how the science and art of agriculture have advanced in this period."

In regard to *corn-stalk sugar*, the Commissioner observes, "there is every reason to believe that all the difficulties in making good sugar from this vegetable, will be removed," &c.

Among other valuable articles in the appendix to the report, is a communication from Dr. Jackson giving the results of an analysis of several varieties of Indian corn and other grains. The different constituents of the several kinds is quite surprising—some containing a much larger proportion of oil than others. The subject is well worthy of attention, as it has been long known that there is a great difference in the fattening tendency of different kinds of corn.

Medico-Chirurgical Review.—This is unquestionably the most valuable journal of Medicine and Surgery published in this country, and for those belonging to the faculty, we should suppose it must be of great service; indeed, every one whose taste inclines them to study such subjects, could not fail to be benefitted by its perusal. In the number for January, now before us, the publishers inform us that arrangements have been completed, to give their journal a development, that has not been attempted by any journal in Great Britain or elsewhere. "Each number," say they, "will contain three hundred pages of closely printed *Critical Analysis* of all the best works, foreign and domestic; forming a quarterly library of progressive practical Medicine and Surgery. By this arrangement, the profession in this country will be put in possession of the *best* parts of most of the works on Medicine, and the collateral branches, issuing from the European presses"

Published quarterly, by R. & G. S. Wood, 261 Pearl-street, New York. Terms, $5 per annum, in advance.

Still Another.—We have received the Arkansas Farmer, published by J. Gish, at Little Rock, Arkansas, monthly, at one dollar a year. We trust it will be an aid in advancing agriculture in that quarter.

SHEEP IN OHIO.

It is computed that the capital invested in sheep-husbandry in the State of Ohio, is $12,000,000—the number of sheep in 1844, being 3,000,000, requiring 600,000 acres of land for their support. Great numbers of sheep have been slaughtered in this State during the last year. Besides the number killed for market, and domestic use, which is estimated at 200,000, it is stated that there were slaughtered for the pelts, hams and tallow alone, during the last season, at Cleveland, Columbus, Zanesville, and other places, 100,000—making the whole number killed in the State last year, 300,000.

If this statement is correct, and Ohio has furnished her quota of the number of sheep sent during the past year to Illinois, Wisconsin, Iowa, &c., we presume the natural increase would not be equal to the number exported and killed, and that there is a less number now in that State than there was a year ago.

According to the returns for 1840, the number of sheep in the United States was 19,311,374, and the whole amount of their wool, 35,802,114—giving an average of less than *two* pounds to each sheep. The average weight of fleeces in England, is over *four* pounds. The increased weight is to be attributed to the improvement of their breeds, and to superior attention and care in sheep-husbandry.

CHEAP MODE OF REARING HOGS.

The Maine Farmer contains an account of the mode in which Mr. True Remick raised six hogs, which is worthy of attention. It is stated that the pigs were farrowed in May or June, 1843. Four of them belonged to one litter, and the others to two other litters. The first summer they were kept in a close pen, and fed with skimmed milk and boiled potatoes. In the fall they had a run of an acre of pasture ground, and through the succeeding winter they were kept entirely on boiled potatoes. On the first of May last they were turned into the cow-pasture, with rings in their noses. While running in the pasture they had forty bushels of raw potatoes given them, but had no other food till put up to fat. Two of the sows raised pigs—eleven in all. The last of September they were put up, and fed with boiled potatoes and a little milk, but nothing more. The long, red potatoes were the kind used, and it is well known that swine are much more fond of these than any others. The hogs were killed from the 6th to the 28th January last, and their average weight, dressed, 398 pounds—the largest weighed 513 pounds. The account states that the whole six never ate so much as three bushels of meal of any kind. If this account should come to the ears of some of the French chemists and physiologists, what would they afterwards say about there being none of the fat-forming elements in potatoes?

DEFICIENCY IN THE SUPPLY OF PORK FOR 1844.

We are not surprised at the falling off in the amount of pork slaughtered in the west last season. From 1838 to 1841, it is well known that an excitement, amounting almost to a *mania*, prevailed through the country in relation to hogs. Improved breeds were sought after with great avidity, and in many instances very high prices were paid, particularly for Berkshires. The natural consequence of this excitement was, first, that unusual numbers of hogs were reared and fattened, and of course the pork-market was glutted. The unprecedently low prices of pork in the western markets for the years 1841 to '43, proved almost ruinous to those farmers who relied on that article for their chief income. Many farmers were forced to sell their hogs for no more than a dollar and fifty cents per hundred, "dead weight," and in some instances for less. They could not stand such low prices, and hence followed the second result of the former excitement, viz: the raising of but a small number of hogs, and the falling off in the quantity of pork killed in the western country last year. We see it stated in various papers that the amount packed at Cincinnati last year was less by one-third than for the year previous. At St. Louis, it is said, the decrease is still greater; and through the State of Illinois there is said to have been a falling off of from one-third to one-half. In Ohio the falling off was much greater, as we are informed, at the interior slaughtering places, than at Cincinnati. In the Scioto valley, for instance, where the number slaughtered at nine places, in 1843, was 121,800, the number for 1844 is only 48,350.

It seems probable, from present prospects, that pork will command, at least, remunerating prices the coming fall, and those farmers who had the foresight to see this, and have wisely provided themselves with a sufficient stock of a good breed of hogs, will be likely to reap their reward.

Union (Conn.) Ag. Society.—Good Cows.—We have before us a copy of the report of the Executive Committee of this Society, for the last year. It contains many interesting facts. The committee state that there were at the last exhibition, 104 yoke of oxen, which competed for the several awards. In reference to them, the committee say—"The exhibition was certainly creditable to their owners, from the appearance and ready obedience to the word of their driver, without a resort to the cruel infliction of the lash." Among the cows exhibited, there were two very highly commended. One of these, a heifer of two years of age, five months in milk with ordinary grass feed alone, produced 13 lbs. butter from October 9 to 15th inclusive, besides affording to the family 3 pints of new milk per day—the other a 6 year old cow, two months in milk, with grass feed alone, produced in seven days in the month of October 11¾ lbs. of butter; in the month of September, the same cow produced 8 lbs. 6 oz. in four days in better feed.

Of horses, the committee speak highly of one, as a farm horse, owned by J. N. Blakeslee, of Watertown. Mr. Blakeslee's Merino sheep are likewise spoken of as a valuable stock. In the department of Farm Products, Butter and Cheeese, and Domestic Manufactures, are spoken of as highly creditable and encouraging.

Osage Orange.—This tree is found wild in Mississippi, Arkansas, &c., where it is said to attain the height of 20 to 25 feet. It has lately received considerable attention as a plant for hedges. It readily adapts itself to the climate of the middle and eastern States, and though not growing so large as in its natural location, it is one of our most beautiful ornamental shrubs. The American Farmer's Encyclopedia gives the following description of it: "It is very branching; each branch being armed with numerous sharp thorns. The wood is remarkably tough and solid. The male and female flowers are on separate trees. The fertile, or female tree, bears fruit abundantly in a very few years. These are round, rough, and greenish-colored, resembling somewhat an orange, and weighing from 12 to 18 ounces, containing from 100 to 250 seeds." The wood is said to be very elastic, being preferred for bows by the Indians to any other. The tree is said to be readily propagated from seed, and its growth is so rapid that it will make a very good hedge in from three to five years.

Number of Kernels in a Bushel of Grain, &c.—Our friend Holmes, of the Maine Farmer, says it has been ascertained by actual counting, that a bushel of

Wheat,	weighing	62	lbs. contained	550,000	ker'ls.
Barley,	"	52¼	"	520,000	"
Oats,	"	32	"	1,200,000	"
Eng. Horse Beans,		64	"	87,000	"
Poplar Pea, (Eng.)		64	"	110,000	"

Dr. Holmes suggests that if we were *sure* that every kernel of wheat which we put into the earth would grow and come to maturity, we could so place them that a small portion of a bushel would be sufficient to plant it. Taking 42,360 square feet for an acre, and dividing each foot into four compartments, and placing a kernel of wheat in the centre of each, Dr. H. says the acre will only require *four-fifths* of a bushel. This is, in effect, the dibbling system of England; and where land is dear and labor cheap, it has its advantages.

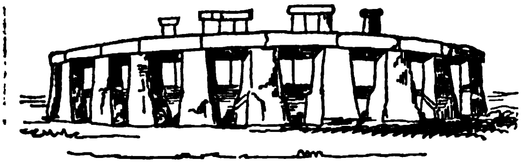
MR. HORSFORD'S LETTERS—No. II.

London, November, 1844.

Mr. Editor—At Blanford, I had the pleasure of looking upon an English Fair. The streets were crowded with little flocks of South Down lambs and yearlings, and flocks of other ages and breeds; little droves of swine, crates of poultry, loads of rakes, brooms, sheep-racks, groups of cows and calves, and indeed almost every kind of thing in the exchange of which, farmers could be engaged. Each pig drover kept his parcel in a compact group by the side of the street, and each shepherd, with the aid of a dog, kept his little flock, varying from a dozen to fifty, distinct from all the others. The sheep were moreover marked and branded, so that they could readily have been separated.

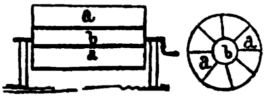
As we drove on from Blanford, gipsey encampments occasionally met our view; a little tent was pitched by the road side, and near it, a small house, upon wheels, which was entered by a ladder. Upon the grass, before the tent, the group of children and older persons, were seated, engaged in the manufacture of brooms, sheep-racks, &c. This most singular people have a physiognomy of their own, as well as a mode of life, and system of laws.

Stone-Henge, to which I think I alluded in my first letter, is about nine miles from Salisbury, in the midst of the *plains*, and very near a number of mounds. It consists of blocks of stone, dispersed in circular form, most of which are now thrown down. The outer circles of columns are surmounted by massive coping, and must have been not less than a hundred feet in diameter. The next inner circle was less complete, and the columns were dispersed upon three sides in pairs. A third inner circle was of columns much less in height, without coping, and far less regularly arranged. Within this, the so called *altar stone*, projects just above the surrounding soil. I subjoin a sketch of what I fancied, from a hasty examination just at evening, the temple once was. At what period in the history of Great Britain, this ancient work served the Druidical priests, remains to be ascertained. It must have been there long before the Christian era, as the Romans seem to have had as little knowledge of its origin, as the race of the present day. Its history is not more obscure, than is all knowledge of the mode of applying mechanical powers, which must have been employed in the transportation of the blocks of stone. Some of them are four by five and a half feet, and not less than twenty-five feet long. They are upon a foundation of chalk, which extends many miles in every direction, and are themselves of an exceedingly hard rock, whose original site, a guide assured me, was in the extreme west of England. A block of similar form, and identical as a mineral, lying in the bed of an intervening stream, favors this opinion. My conjecture on our way thither, from what I had read and heard of the vast size and weight of the masses of stone, was that the temple had been resolved from a gigantic boulder, floated upon Salisbury plain by an iceberg; but not a boulder, not even a pebble, did I see in all the region about. (The little sketch I have given, is from memory, and may be defective in some particulars, though it gives the idea of the circular form that I had not received from engravings.)


(Fig. 42.)

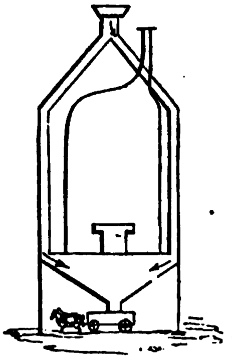
While in London, I had the pleasure of attending a meeting of the Society of Arts. This institution has for one of its objects, the patronage of improvements in arts and manufactures. It has a collection of paintings, and a museum of models, implements of handicraft of numerous kinds—specimens of manufactures, &c. &c. On the evening of my visit, a paper was read by the secretary, upon honey and the habits of the bee. It had been prepared by a gentleman, who I should think was a dealer in honey as well as an apiarian, for there had been brought to illustrate the paper, some twenty varieties of the article, from as many different localities and about as many different latitudes. Some of it was in the comb, and in little hives, boxes, glass vessels, &c., but most of it was in earthen jars. Some of the famed varieties were from the Islands and coast of the Mediterranean, and were impregnated with aromatic scents, said to increase greatly their value. The most expensive kinds were from Narbonne and Minorca. All the jars were passed among the audience of ladies and gentlemen, and tasted by all who cared to do so.

Besides this paper, there was a verbal description of two instruments for keeping wheat and other grain dry, and for exterminating insects. One of them was what may be readily understood, if to illustrate its construction, two wire gauze cylinders of equal length, but of unequal diameter, be placed one within the other, and partitions extending from end to end, be arranged so as to divide the space between into eight equal parts. The ends are closed, with the exception of a circular aperture at one end, in which a winnowing or exhausting wheel is placed; and the whole is mounted upon an axle which is made slowly to revolve. The model was about three feet long; but the instrument would hold, the gentleman who described it said, about 800 qrs. The circulation of air through the grain, was produced by the revolutions of the winnowing wheel, exhausting the interior of the cylinder, and the motion of the grain in the different apartments by slow revolutions of the whole machine. This motion dislodges also the insects. It is called the Grenier Mobile, and I see has been exhibited since, before the Royal Agricultural Society. (The accompanying little diagram will explain the structure—a. a. grain apartments in a gauze enclosure, supported by strong frames. B. the opening within the cylinder.)

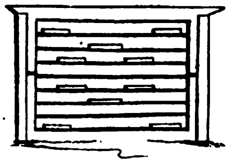


(Fig. 43.)

Another instrument for the same purpose was also exhibited and explained. It consisted of two cones one within the other, standing upon two similarly arranged cylinders. Within the inner one, a fire could be placed, the smoke from which passes out through an escape pipe, while the heat passed through myriads of minute apertures, with which both cylinders and cones are pierced into the grain. The heat expelled all the moisture, and with it, the maggots, it is said. The grain is introduced at the top, and discharged in a cart at the bottom. It can be detained any length of time on its passage, and subjected to as thorough drying as can be required. (The accompanying diagram was sketched while listening to the explanations, and is substantially correct.)


(Fig. 44.)

There was exhibited the same evening, a fixture for drying cheeses. It was a frame filled with shelves at a distance asunder exceeding a little the diameter of the cheeses; and was supported upon an axis. On one side of the shelves, perpendicular strips of board would prevent the cheeses from slipping off. When the cheeses which were disposed alternately on one side and the other, at the top and bottom, to maintain the equilibrium, had remained sufficiently long in one position, the whole frame of shelves was turned through half a revolution; and all of the cheeses were bottom side upwards, resting upon what was before the upper surface.


(Fig. 45.)

There was also exhibited a "Patent for freezing, cooling, preserving and churning apparatus."

This Society, Mr. Petty Vaughan,* whose name is not unknown in America, assured me, had greatly promoted improvements, by encouraging through reports from practical men, the use of such articles, and the adoption of such new suggestions as otherwise might never have been known.

May I not inquire if something of the kind can be incorporated with the State Agricultural Society? Might not the interest and usefulness of the agricultural meetings about to assemble, be greatly increased, if it could be announced in the morning papers, that such and such improvements, or new inventions, would be described, or reports upon some previously examined, be read, at the meeting of that evening? E. N. HORSFORD.

AURORA AGRICULTURAL INSTITUTE.

MR. EDITOR—Agricultural schools are in Europe no longer an experiment. Their success has more than realized public expectation. Their great utility is now there unquestioned, and their commanding public importance acknowledged. In this country public opinion in their favor has been for some years gathering strength. Their utility and eventual success here is, by the well informed generally, not doubted; but their immediate success may not be so certain. Of late much has been said and written upon the subject. The late Judge Buel, in one of his last public addresses, closes some spirited remarks upon that topic by saying: "They should be established—they will be established—and the sooner they are established the better for our country." The same sentiments have been since very frequently uttered by other distinguished agriculturists. All seem anxious to have them established here, and various modes have been suggested. Several attempts have been made to organize an institution on an extensive scale and requiring a large amount of capital. These have all, thus far, failed, as all like attempts will, as we fear, for the present certainly fail—not for the want of well founded claims to public favor, but for the want of that knowledge of those claims which personal observation and experience alone can impart. Such schools are here an experiment, and like all experiments require to be tried with as small an expenditure of funds as practicable. On such a scale the experiment is within the power of individuals; and it now seems obvious that if any early progress is made in their establishment in our State, it must be effected by private enterprise. Some of the plans which have been suggested for a private institution would seem to be feasible and to promise success.

The undersigned, with his associates hereinafter named, have been waiting with some considerable degree of patience the movement of others in the matter. They feel a deep interest in the improvement of the agriculture of the country, and in the early establishment of professional schools devoted to that object. They would not knowingly hazard or delay the future triumph of the enterprise by any movement they might make; but they feel that some practical plan should be adopted, and executed too, without longer delay. And without the knowledge of any similar organization by others, they have themselves made arrangements for the commencement of a school under the above name and title.

The farm upon which the institute is located is situated in and directly adjoining the village of Aurora, on the east bank of Cayuga Lake, in Cayuga county, New-York, sixteen miles from Auburn, by stage, and twelve south from Cayuga Bridge and the Auburn and Rochester railroad, by steamboat in summer. It contains 212 acres, under a good state of cultivation, with good improvements. The soil is various, fruit abundant, and the buildings are sufficiently extensive for the present—part of them nearly new. The farm and dwelling houses front directly on the lake, and are only about 130 rods from the church, academy, and steam-boat landing. The location is considered one of the most desirable of the many beautiful situations on the borders of the lake, commanding an extensive and varied prospect of its waters and of the surrounding country, and is altogether admirably adapted to the end in view. The country adjacent, for a few miles east and along the lake, is believed to be unequalled for beauty and fertility by any section of the same extent in the State.

It is the intention of the undersigned and his associates that this institution shall afford every facility for young men to make themselves thoroughly acquainted with the principles of agricultural science, and their judicious application to practical husbandry; and particularly to afford young men from our large towns the most favorable opportunity for preparing themselves for country life and agricultural pursuits. In connection with lectures and recitations upon the different branches of natural science connected with agriculture and horticulture, regular labor in the field will be required, and there all principles involved will be explained and impressed upon the mind. It is also their intention to commence a course of experiments, in order to test the correctness of those principles in agriculture which may be now generally received, but are not yet well established.

The undersigned will have the general superintendence and management of the institution. He will receive its members into his family, and keep them under his immediate supervision and charge. Particular regard will also by him be had for their mental culture. A suitable person and competent farmer will be employed to superintend the field operations during his necessary absence therefrom.

Dr. ALEXANDER THOMPSON, of this village, (a gentleman, in the judgment of Mr. David Thomas, every way competent,) will have the particular charge of the scientific department. Instruction in botany, geology, and agricultural chemistry will receive his particular attention.

Mr. DAVID THOMAS, who resides in the vicinity, will visit the institution and promote its object and design, by such advice and information as his well known scientific attainments, and long experience in practical agriculture and horticulture, will enable him to impart.

Terms $150 a year, payable quarterly in advance. No person under fourteen years of age will, as a general rule, will be received. CHARLES C. YOUNG.

Aurora, March 12, 1845.

The publication of the above from Mr. Young, supersedes the necessity of publishing, at length, a letter we have received from B. P. JOHNSON, Esq., President of the N. Y. S. Ag. Soc'y, on the same subject. Mr. J. says —"From my acquaintance with Mr. Young, I am satisfied that he is fully competent to manage an institution of this kind, combining scientific with practical agriculture. The gentlemen associated with him are well known to the public, especially Mr. Thomas, who will aid and advise the principal in the management of his institution. I am much gratified that an experiment is about to be made to give instruction to our young men, many of whom, it is believed, will avail themselves of the advantages of this institution. Ten or twelve young men can yet be received at the institution this spring."

CUTTING TIMBER.

IN cutting timber for farm buildings and other purposes, it often becomes requisite to know the height of the trees, more particularly of the straight part of the trunks or such as will do for single straight sticks of timber. Take a ten foot pole, (or one of any other known length,) and measure off the required distance from the tree, and make a mark on the ground. Then measure back the length of the pole towards the tree, let a second person hold it perpendicularly, place the eye at the mark on the ground, and ranging with the top of the pole towards the tree, of the top if the pole strikes above the straight part of the trunk, the stick of timber will be too short; if at or below the first crook, it will be long enough. A simpler, but somewhat less accurate way, is to take a stick just long enough to reach from the ground up to the observer's eye, who then paces the required distance from the tree, throws himself on his back, looking towards the tree, while a second person holds the stick upright at his feet, and he makes his observations as just stated.

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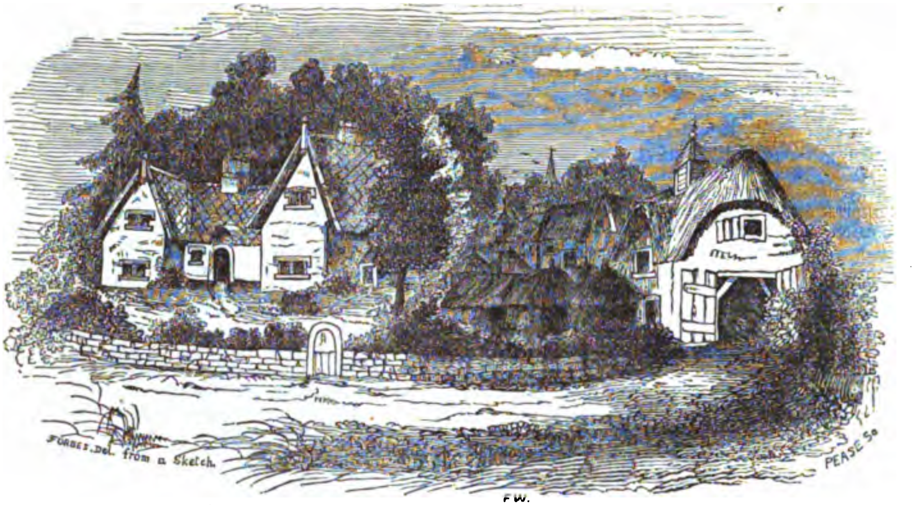
* Mr Petty Vaughan, is a son of the late much respected Benjamin Vaughan, Esq. of Hallowell, Maine.—ED.


FORBES. Del. from a Sketch.
PEASE Sc
F W.

ENGLISH FARM HOUSE AND OUT-BUILDINGS—(Fig. 38.)

(Drawn and Engraved for "The Cultivator.")

MR. MITCHELL'S LETTERS—NO. IV.

Liverpool, Eng, *4th Jan* 1845.

LUTHER TUCKER, ESQ.—I send you with this, as promised, a little sketch which will give you a general idea of an English farm house and out buildings. The air of neatness which prevails about every country house I have seen, and which travelers universally remark upon, cannot be represented in such a sketch, much less by so poor a sketcher. Yet I am assured that the farm houses of Lancashire compare unfavorably with those of almost any county in England. Still there is a soberness, a quietness, a tastefulness, a rurality, and a home-look about nearly all I have seen, which once grafted upon the country houses in America, will go far toward making our landscapes equal to English in beauty. The roofs are in most instances in this country, slated; some are covered with tiles baked in the same manner with brick, and formed with a lip turning down upon the upper and under side, so as to hang upon the lathes which run horizontally. Thus the whole roof is laid without nailing. Others still are thatched; the thatch requiring renewal every five or six years. The extreme verge of the gable is generally covered with a tier of heavy stones clamped to each other. Every thing in England is arranged for permanence. Calculations in house building, in fence building and in draining, as in other matters, are made with a view not of one, or two or half a dozen years, but of a century. The barns and out buildings are invariably placed near the dwellings: indeed, not unfrequently the same roof covers both the farmer and his herd. Nor is this connection, from the peculiar structure of the dwelling, rendered disagreeable. I have not yet seen such a diversity of plans, nor so good a system of arrangement, as a whole, as to wish to make full com munication of the order observed. I hope yet to have a glimpse of, and wander among the best farmers and farms of England. I give you the general course of cropping in the best regulated farms in this vicinity—Sandy land, Dairy Farm.

1st. *Oats* on grass ley. Plow in February; sow in March; heavy harrowed—light do. and rolled if dry.

2d. *Wheat.*—Plowed in October.

3d. *Swedish Turneps or Potatoes* in drills. Drawn in November; tops fed to milch cows; roots pitted for horses, cows and sheep.

4th. *Wheat or Barley*, with clover or rye grass—remains in grass 4 or 5 years.

On clayey lands—1st. *Wheat* on grass ley. 2d. *Oats.* 3d. *Fallow.* 4th. *Wheat.* 5th. *Clover*, and pastured 4 or 5 years.

The cattle are not superior in this region; some fine dairies of improved short horns. Though I am assured, that over the river in Cheshire—the great cheese county—Short Horns are not thought well of for milkers; where they have Ayrshires, Devons, Welsh and Irish. Scotch, Welsh, Irish, and some Yorkshire and Holderness are fed for fattening. For sheep, the prevailing *choice* stock is South Down and Leicester. Swine are many of them Irish; on the Cheshire side are a cross of the old long bodied with Berkshire and Leicester, or China and Neapolitan. The latter are considered too light and delicate for general favor. To fatten, they are put up early in the spring; 12 months pigs, to feed on offal of dairy, (one to five cows.) Nothing more given for three months; after this, potatoes and some barley meal. Weight, 10 to 14 score. Sows farrow twice a year, in February and August. Young stock is raised (on dairy farms in Cheshire,) 5 to 20 cows—those dropped in March. The food is a half pound of meal in a tub, with scalding water, or whey poured to it, well stirred; skimmed milk added; given till midsummer; then weaned, well pastured, well wintered with hay, bruised oats and turneps; turned to feed in April. Implements are various; perhaps fewer of the improved kinds in this, than in any other county. I send you two or three sheets of cuts with price attached. Tiles for draining are in most general favor; 1,000,000 a year are made upon the Marquis of Westminster's estate alone.

American apples still have a good sale; you will notice in rates given below, their value as compared with English. The English apples, such as I have seen, are small and without flavor. Good pears are in the market, but all from over sea. The "Underhill" apple brand (American) appears to be the favorite one in this part, doubtless from the good state of preservation in which they open. They are, I think, from near Sing-Sing. American cheese is plenty in the markets. Every ship from New-York or Philadelphia, brings a quantity. Its treatment upon the docks under custom officers, is most severe. The boxes or casks in which they are stowed, being knocked to pieces; if they open easily, (packers must take the hint) well; if not, they must come open—no gross weight being allowed. After weighing—one by one—they are tumbled upon the dirty dock from the scale, for the carman to replace in box or cask as he best knows how. I have seen many fine cheeses ruined under this treatment. The sale of American beef is in the cutting; this cannot be told too often; specially is it so in the London market, where inspection is most searching. I should have mentioned in my last, that the tax on beef and pork, for cask and pickle, is almost invariably one-third part; for canvass wrappers of hams, 8 oz. each. Tallow, 12 per cent.

I give you the ordinary retail prices of provisions from the market houses of Liverpool, that farmers at home may compare notes with the British farmer. In some subsequent letter I will give you a list of all the taxes to which the English farmer is subject, that so the comparison of situations may be more complete, and a still higher satisfaction, as I do not doubt it must rest with our countrymen. The duties on coffee and tea are enormous; on the first, 15 cents a pound! on tea, 45 cents! The price of

A goose in market, -	88 to $1 00	Cabbage, per head, -	02 to 04
Fowls per pair, [light,]	60 to 80	Celery, per root, - - -	04 to 08
Turkey, - - - - - - -	$1 to $1.75	American wild ducks,	$1 to $1,25
Hare, (w't of 2 rabbits)	50 to $1.00	Apples, (Eng.)	30 for 22
Beef, per pound, - - -	14 to 20	" (Am.)	14 for 22
Mutton, " - - -	12 to 14	Cheese, (Stilton,) lb. -	25 to 30
Pork, " - - -	12 to 14	" (Cheshire,) " -	20 to 28
Veal, " - - -	12 to 14	" (American,) lb.	14 to 16
Potatoes, per bushel, -	40 to 50		

In my next, I will give you an epitome of such agricultural glimpses as can be taken in a *day's run* through England from Liverpool to Gravesend. After which, and until spring opens (with me,) look for a chapter or two about the pruning hooks and vineyards of France. Yours, &c.

D. G. Mitchell.

MR. NORTON'S LETTERS—No. IX.

Lab. of Ag. Chemistry Association,
Edinburgh, Jan. 21, 1845.

L. Tucker, Esq.—As I have now been long enough here to form an opinion as to the usefulness, and to become acquainted with the operations of the Agricultural Chemistry Association of Scotland, it has occurred to me that a sketch of its history, constitution and present prospects, may interest your readers, the more so as I perceive that the American papers teem with plans for the promotion of the great object of connecting science with agriculture.

Desirous, as an American, to share the benefits of this Association, even more fully than I am able to do in its Laboratory, by attendance upon the meetings of the subscribers, I have enrolled my name among its list of members, and a few days since had the pleasure of attending the second semi-annual meeting, being at the close of the first year of its existence.

The Association took its rise, and this cannot be too strongly urged in its favor, from tenant farmers chiefly; shrewd, practical men, who conceived this plan as most likely to promote, in its direct application to their interests, that science which they felt had become necessary to them.

The two leading objects proposed, were the diffusion of existing information, theoretical and practical; and the enlargement of our present knowledge. For the carrying out of these designs, Prof. Johnston was selected, and having received the appointment of Chemist to the Association, has been for eight months of the past year actively engaged in the prosecution of the arduous duties which devolved upon him.

In the prosecution of the first object, he has delivered no less than fifty-three lectures in nearly every part of Scotland, some of which I have sketched in previous letters. They have been eminently successful, and have awakened much interest in every instance; no less than eight or nine agricultural periodicals have sprung up at various points, as the visible first fruits of success. Private lecturers are also busy in many places following up his teaching, or supplying his place in localities which he has not yet visited. The school-masters too, are aroused, and are many of them actively engaged in the same work, so that the effects of his visits are likely to be permanent.

In this Laboratory, three assistants have been at work, nearly ten hours daily, through the year. Analyses are performed for subscribers, at certain fixed and very low rates, so low indeed as not by any means to repay the expense of the operations. Of the great privilege thus placed within their reach, the Scottish farmers have not been backward in availing themselves. The report says, that no fewer than 384 analyses have been made during the past year; the subjects as follows:

Soils,	134	Marls and Limestones,	27
Guanos,	122	Potatoes and other vegetable products,	9
Ashes of Plants,	25	Miscellaneous,	37
Oil Cakes,	4		
Waters,	26		

The mere reading of this list shows that from the very large amount of work performed, much information and many useful results must have been obtained. With most of the analyses, letters of advice have been sent, and with some of them, elaborate reports. Among some of the more strictly practical points upon which light has been thrown, it may be mentioned that analysis has shown striking differences in the chemical constitution of turneps raised by dung and by guano. In consequence of this, experiments upon their feeding properties have been made, and the result so far, seems to indicate the superiority of those raised by dung. Oats have been found to yield in larger quantity than any grain used for food in this country, those ingredients which furnish muscle to animals.

The quantity of these ingredients in turneps, is under investigation, and it has been already ascertained, that they equal in this respect, 1-30th or 1-4th of their weight of wheat or barley. A variety of rocks have been analysed, with a view to the determination of the quantity of lime contained. The Trap rocks have been found uniformly to contain a very considerable proportion, while the clay slates scarcely contain any. These facts show that we may expect a decided difference in the quality of soil resulting from the decomposition of the two rocks.

These instances show the nature and utility of such researches, and they will I think, give your readers an idea of the sphere embraced by the labors of the Association. But analysis is not all; a very onerous portion of Prof. Johnston's duties has been the answering of questions upon practical and scientific points, for many of the farmers have commenced *thinking*, and propound queries which often touch upon the very verge of our present knowledge, and sometimes go beyond it, opening new fields of most difficult investigation.

I think that this institution may safely be said to have realised the expectations of its projectors. They were most fortunate in the selection of Prof. Johnston for the office which he has filled so well, and to which his energies have been so zealously devoted. By the co-operation of his scientific researches with the practical experience of the farmer, great advances have been made already, and a spirit awakened which will bring forth in all probability, still more remarkable results.

The Scottish farmers, thus have the credit of being the first to establish an institution purely for the purpose of applying chemistry to their profession; so far it has been successful, but remarkable as that success has been, it only opens the way to vast fields for research, yet untrodden. It has shown however, what may be done by united effort, by skill and perseverance, and I would in that light, recommend it to the notice of my countrymen, not that I would consider it absolutely necessary for us to found institutions constituted in exactly such a manner; the form is comparatively unimportant, it is the *conviction* and the *spirit*, that are indispensable.

I may suggest, however, that in the formation of agricultural colleges on an extended scale, such as now seem to be projected in our country, with each should be connected a branch for the pursuit of *chemistry* as connected with agriculture, and for the dissemination of knowledge on that subject. Only by means of such institutions can rapid progress be made, and until they are established the great mass of farmers will be unable fully to profit by the knowledge we already possess.

Our country opens a noble field for improvement, and I hope that we begin to perceive it. Other nations have commenced the work before us, but when our farmers arouse, and apply that American enterprise and perseverance which has outstripped the old world in the paths of commerce, we shall have no cause to blush at our deficiency, nor at the share that we shall take in completing one of the leading desiderata of our time, a system of scientific agriculture. Very truly yours,

John P. Norton.

Look to your bees and poultry.

EXPERIMENTS.

Sowing Indian Peas broadcast.—Several times in my life, I have plowed in seed peas, broad cast, to be used either for crop, manuring or sheep pasture. The quantity to the acre, according to the quality of the land, from one to two bushels. One who has surplus peas, and ground too poor to grow clover, may do well to sow them for improvement; but as they make superior pasturage for sheep, perhaps one may afford to buy seed for such purpose, even on poor land. The Indian pea yields well on poor land, (cold clays excepted,) and abundantly on ordinary; but on rich ground, a heavy crop of vines, but no peas. When sowed sufficiently thick, broad cast, the raising kind of this pea stands well for mowing.

Pumpkins and Cimlins in corn field.—It is folly to plant either pumpkins or cimlins in any other than rich land, and such, if properly seeded with corn, will produce with us, by the middle of July, a corn crop sufficiently luxuriant to smother every vine, pea, turnep, weed and grass. Whatever a corn field, properly planted, may yield in addition to corn, is just so much substracted from the corn.

Oat and Orchard Grass pasture.—Three years past, I sowed 8 or nine acres in oats and orchard grass. These acres lay in detached spots, and all within a pasture inclosure of about 200 acres; and which, not being fenced separately, was grazed closely from the beginning to this present time. The oats made an excellent pasture a good portion of the first year; and the orchard grass, where the land is rich, has made a good pasture ever since. New land of medium quality, will produce orchard grass very well, provided the soil is retained on the surface, to do which the coulter should be used to put in the seed.

Irrigation.—Seeing the many and great advantages arising from casting water on lands or crops, I am surprised and mortified to see so little of it done in my neighborhood, yea, and my country.

Arthur Young, in his Travels in Spain, says that "in the midst of an arid, wretched desert, he came to a spring which was immediately conducted into a reservoir, and thence used to irrigate maize, hemp, cabbages, and beans, which were all fine. As soon as the land is sown, it is watered, and periodically till the plants are up; moderately, while they are young, but every day and sometimes twice a day, when full grown. The effect is surprising, and infinitely exceeds that of the richest manure that can be spread on any land."

I can turn a creek on a portion of my bottom lands at pleasure, and have ascertained its effects on the following vegetables. Moderate irrigation improves rye at any stage of its growth, but there is danger of its rusting. When corn is in silk and tassel, it will grow and thrive wonderfully in mud the balance of its days. Irish potatoes and cabbages like frequent flashings, but as the cabbage should be worked often and during the whole summer, the farmer should calculate accordingly. Red clover likes a wetting, and white clover likes many. Profuse irrigation does not suit oats, peas, artichokes, pumpkins and cimlins; and will rot all the lower end of carrots, parsneps, beets, radishes, turneps, &c. Irrigation in the slightest degree does not suit tobacco or wheat, and to excess, is destructive.

Every person will of course know that casting water on a crop is useless labor when there is abundance of rain and consequently, the hotter and dryer the climate, the more necessity for irrigation. I wish some one, owning a few hundred acres of poor sandy land, which could command water sufficient for its irrigation, would exchange with me for as many acres of the richest kind of mountain land. Or if he will not do this, I wish he would go about its improvement, and let me know the result.

To kill wire worms and cut worms.—I have never been pestered with worms of any kind in my corn when the land has been thoroughly plowed in winter; but have always suffered on rich ground, when this has been neglected.

Early planting and sowing.—The earlier we plant or sow spring crops, the better, provided they are not in danger of being frosted; and the earlier we sow wheat and rye, the better, provided they are not in danger of premature heading. The objects and advantages of early seeding in both cases are the same, viz: 1st, less labor and risk—2d, earlier maturity—3d, fewer weeds and grass to contend with—4th, less exhaustion of the soil by evaporation, because of the timely shelter afforded the earth—5th, a lower and stouter vegetable.

Manuring in advance.—The greater portion of my manures are spread broad cast on the surface one or two years in advance of a crop; and the ground generally not grazed. If any person can do better, let him go about it.

Ditch Mould.—I am now engaged carting on my meadow about 200 loads of mould, taken from a reservoir about 15 months past. It is black, rich and friable, and perhaps worth as much as so many loads of dung; particularly on that portion of my meadow on which it is spread, it being a red stiff clay. The ditch or reservoir is now filling again by means of a small stream, which is made to run out at either end at will.

Amherst, Va., Feb. 1845. Za. Drummond.

THE VALUE OF THE SCOTCH LARCH IN ARTIFICIAL PLANTATIONS.

Mr. Editor—One of your correspondents in the October number of your interesting journal, seems desirous of some information as to the adaptation of this valuable tree to our country, and also as to the distinguishing difference in the natural habit of growth, quality of wood, &c. between the foreign and the native species, more commonly known as the "Hackmatack."

Having paid considerable attention to the Scotch Larch, and imported some thousands for the purpose of ornamental plantations, I am happy that it is in my power to communicate some observations respecting this comparatively rare tree, that may not prove uninteresting.

Since the decline of the oak in England, from the vast inroads made in these once noble forests for the purpose of ship-building, the Larch may now be considered as the great timber tree not only of that country, but of Europe; and if it does not entirely and eventually supersede the oak, it will at best give it that breathing space that it so much requires to again equal those specimens of which so few, alas, now remain.

The European Larch, claims its birth among the Alps and Appenines; there its great hardihood causes it to flourish, where no other tree can survive; hanging over rocks and precipices, which have never been visited by mortal foot, it assumes that wildness that renders it invaluable as a picturesque tree. Strabo speaks of Larches of a very great size; many of them he says would measure eight feet in diameter, and at this day even, masts of larch from 100 to 110 and 120 feet in length, have been floated down the Valois through the lake of Geneva and down the Rhone to Toulon for the French dock yards. In the Memoirs of the Royal Society of Paris for the year 1787, there is an Essay by the President, M. De La Tom D'Aigue, on the culture of the Larch, in which it is celebrated as one of the most useful of timber trees; he tells us that he has in his own garden, rails that were put up partly of oak and partly of larch, in 1743. The former he says have yielded to time, while the latter are uninjured. Experiments to test the durability of this wood, have also been made within a more recent date in the river Thames; posts of equal thickness and strength, some of oak and some of larch, were driven down in the river, where they were alternately covered by the tide, and there left to dry by its fall; this species of alternation being of course the most trying to timber, and accordingly the oak posts decayed, and were twice renewed during a few years, while those of larch remained altogether unchanged; a particular advantage this tree possesses for naval architecture, is that the wood is almost indestructible by fire, and not liable to splinter in engagements. It is also valuable to the cabinet maker, as besides its great clearness and hardness, it is susceptible of so fine a polish as to be almost transparent, and may in this state be wrought into the most beautiful wainscot. Before the use of canvass became general by the old masters, it was much used to paint on; and many of Raphael's pictures are painted on pannels of larch.

The superiority of the foreign over our native varieties, consists principally in the great rapidity of its growth, and its power of adaptation to the poorest soil; while the American larch is properly a swamp tree, and grows but indifferently in any soil not naturally moist and humid; the foreign, on the contrary, will grow in any soil or situation, no matter how meagre or bleak, and is therefore admirably adapted to plant upon our mountains and barren lands that are valueless for other purposes, since, in addition to its rapid growth, it possesses the peculiar property like the locust of manufacturing a soil as it increases, from the annual decomposition of its leaflets; thus we find in the extensive larch plantations of the Duke of Athol, that land not worth one shilling sterling per acre, before the larch was planted, became worth eight to ten shillings sterling per acre after the first thirty years, when all the thinnings were completed, and the trees left for naval purposes, at the rate of 6*s*., four hundred to the acre, and twelve feet apart.

The larch, as I before remarked, is a very quick grower, comparing, and in fact exceeding the poplar, and our most rapid growing trees. The anecdote is, I believe well known, of the Duke of Athol seeing a British frigate built in 1819, at Woolwich, of timber planted at Blair and Dunkeld by himself and the Duke, his predecessor. I have myself, trees that eighteen months ago were growing in England, that have made shoots of over five feet this season.

As regards the difference of appearance between the two species, as to foliage, habits, &c., I confess that to my taste, there is hardly a comparison; the foliage of the native sort is a bluish green, and though perhaps more delicate than the foreign, yet this is more than compensated by the picturesque and infinitely beautiful manner in which full grown trees feather to the ground—the American larch being more rigid and stiff, and possessing little of that graceful and pendulous manner which so distinguishes the foreign tree.

After these remarks, I cannot too warmly recommend the extensive introduction of the Scotch larch among us both for ornament and profit; when judiciously treated, nothing adds so much to the spirit or charm of artificial plantations, as this striking and picturesque tree, and for purposes of profit, it possesses all the valuable properties of the locust, while it exceeds it in durability and rapidity of growth, besides being less fastidious in the soil it requires, and I cannot therefore suggest a better appropriation of the many acres of the rocky, mountainous and barren land which exists among us, than plantations of larch. They can be imported into this country at a cost of less than two cents per tree of three feet high; and for extensive plantations, trees of one-third the cost and size would do better; and when we consider the lightning rapidity with which our primeval forests are disappearing under the axe of the *improver*, does it not become the duty of every prudent farmer and land-holder to ask himself, how are we to meet hereafter the deficiency in timber? I would answer, plant larch. You can at least emulate the Long Island farmer, who portioned off his children from his locust grove, planted on his marriage.

You may even do more with the larch, than he did with the locust; for your descendants may, in course of time, verify the saying of the Romans, "That a post of larch will outlive a pillar of iron."

By a careful comparison of the value for ship building, of the oak and larch, made in the government plantations in England it would appear that a larch of 50 years, produced as much available timber, as an oak of 100.

Fishkill Landing, Feb. 11, 1845.

AGRICULTURAL MEETINGS.

MR. EDITOR—The weekly agricultural meetings at the Capital, are attracting much attention among farmers. The proceedings are read with great interest, and the inquiry is often made why the editors of country papers do not more frequently publish them. It will not, however, be delayed much longer. The interest of the publishers will lead them to furnish such intelligence as the public require.

I was much pleased in reading the discussion at the sixth meeting, on the subject of *manures*. Having had some experience in top dressing grass lands with animal manure, and as the results were different from the views of my esteemed friend Bement, I will give you a brief statement. A few years since, having a piece of meadow land which produced very light grass, and being so situated that I could not plow it up, I determined to give it a good top dressing of stable manure. I drew on and spread early in the spring, about twenty loads to the acre. My workman was very sceptical as to the experiment, and said that there would be no grass. The same man, when the piece was mowed, became a convert to this method of improving the meadow. The crop was more than doubled, and the effects for three successive years, were most manifest.

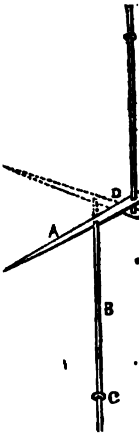
We want many carefully made experiments on the subject of the proper application of manures, especially those from the yard of the farmer. Upon these, we are mainly in this country to rely, and the investigations which are making, will, I trust, lead to the establishment of some general principles, that will materially aid in the application of manures.

I am preparing another piece of land the present season, in the same manner as the one alluded to, and should my life be spared, I shall give the result to the readers of the Cultivator. B. P. JOHNSON.

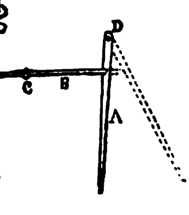
Rome, March, 1845.

BARN-DOOR FASTENINGS.

MR. EDITOR—I have some barn-door fastenings of my own invention, which I find the most convenient of any I have seen, a description of which I forward you.



[Fig. 40.]



[Fig. 41.]

A. (fig. 40,) handle, eighteen inches long, made of one-horse waggon tire, tapered to one-third its width, with three holes punched through the wide end, two inches apart.

B. B. two bolts, of three-quarter inch round iron, attached to the handle, either by splitting the end, or by a rivet.

C. C. two eyes, with screws or staples driven thro' the door at the top and bottom, thro' which the bolts pass to guide them to their proper places.

D. screw-bolt, which fastens the whole to the middle rail of the door frame, and passing through the middle hole of the handle; which I find is all that is necessary in the middle, without any guides but the ones at the bottom and top of the door.

The opposite door I fasten by a bolt on a different principle from any I have seen. Annexed you have a drawing, (fig. 41,) but you will perceive that some other fastening will be required if you wish to open the door from the outside; but with me it is necessary to keep my barn locked; but with those who use a latch, I think if they will try my double bolt fastenings, they would not willingly be deprived of them.

A. (fig. 41,) handle fastened to the middle rail of the door, by a screw-bolt at D.

B. Bolt, one foot long, of half inch iron.

C. eye or staple, through which the bolt passes.

The dotted lines show the position of the handle when the bolt is drawn. FRANKLIN COUNTY.

NOTES OF TRAVEL IN THE WEST—No. II.

BY SOLON ROBINSON.

My Dear Readers—The violent snow storm that drove us into quarters last night, like violence of all kinds, soon spent itself, and having given place to a clear cold day, seat yourselves by my side, and we will roll away to the south, and notwithstanding that the wind is "dead ahead," and blowing a fine fresh breeze, we shall beat up against it with ease, though not with so much comfort as you might desire. The first dozen miles, you may observe, after leaving the grove of fine timber on our right, is too level and "wettish" to be desirable. But here we come to the beautiful village of Tremont, (the county seat of Tazewell,) with its handsome court-house and church; but what interests us more, is to see that the sons of New-England, who settled and still flourish here, so far departed from the fashion of this country, that they have given wide streets and large building lots, many of the occupants of which have still farther departed from fashion, as we can plainly see by the multitude of shade and fruit trees that surround and beautify their dwellings. We will not call, though tempting signs hang out, for we are told that notwithstanding the beauty of the place, old King Alcohol, here holds undisputed sway. If this, "an o'er true tale" should be, I hope the Tremontonians will rouse themselves to break the tyrant's rule.

In the valley of a stream called Mackinaw, that winds through broken sandy hills of stunted timber growth, we witness the first marks of that great flood that desolated thousands of western acres. The little cabin is alone standing; all else is swept away. As we rise again upon the 25 mile wide prairie, which our road lies across, we see five miles ahead, a most enormous frame house, which was built, (all but putting together,) in Rhode Island, and now stands a monument of a bad speculation, towering its three or four stories far above the half dozen little tenements below, that rise from the town of Delavan, a name that sounds familiar in the ears of all teetotalers.

This town was projected for a "colony;" whether it was a part of the project that the colonists should live without wood, I am not informed, but certes there is but little in sight, and that little far away to the west, while eastward lies untold miles of prairie, and southward along our road a long 12 miles will bring us to an only house, with just about timber enough to fill an old fashion New-England fire-place, but for eight miles more, there is no one to claim a share of this poor pittance of fuel or interfere with this ocean of prairie. To day we cross several creeks that would be good mill-streams, but unfortunately there is neither fall or good banks. The bridges are dilapidated by the high water and natural quick decay of timber in a damp climate, and the roads such as nature made them, with but little labor from this non-road-working community. The night we'll spend at what is somewhat rare, a comfortable country inn, at a small specimen of a village called Middletown, so called perhaps because like many others, it is in the middle of a middling sized prairie, 20 miles north of Springfield, the capitol of the Sucker State. From whatever cause this name for the State originated, I doubt not that many who have been "suck'd in" by the private speculations of individuals, as well as by the wild projects of internal improvement that have suck'd in so many millions of dollars, will think the name an appropriate one.

Indications of a change of soil are visible to day. The timber is such as is commonly found on the alluvial bottom lands of the west. Maple, elm, black-walnut, ash and buckeye, interspersed with oak, the prevailing timber further north. And a still greater indication shows by the absence of barns and other "yankee fixings," that show the yankee thrift of character, that a population of corn-growing, hog-feeding, corn-bread and bacon-eating southerners are in the majority in this latitude. Our eastern built carriage, with two wheels in the rut upon one side, while the other two are jolting upon a rough ridge, tells us that we are in a country of "wide track wagons," driven with the "single line" as we see, by a teamster seated upon one of the horses. And why should it be different? Did not their father's so drive before them!!

In the bluff of the Sangamon river, (5 miles from Springfield,) which is here a good mill stream, and so used, where it has been dug out to form a road to a fine new bridge, we see the rock in every state of formation, between soft clay and hard limestone. From the river to near the town, the road lies over a tract of very poor sandy hills, full of gulleys and covered with brush, that probably never will again be worth as much money as it was valued at a few years ago, when Springfield was "going to be" a London or Pekin, in the eyes of men, that in counting dollars, discarded all figures below millions.

Now, on this 12th day of January, 1845, at Springfield, the capital of the State of Illinois, it is a mild sunny day, more like May than midwinter, and a drouth prevailing like midsummer. In fact, it was so dry last fall, that not half the seed sown grew. and many of the wheat fields look as bare as naked fallow. Whether it will grow in spring, is yet to be proven. My opinion is, that it would be good policy to sow it now with a seeding of spring wheat. Many of the corn-fields that I have passed, bear ready evidence of the prevailing rains of the spring and early part of summer. In some of the fields, on flat prairie, the crop was not worth gathering, while in others of drier soil or more rolling land, the crop was a good one for this country of untold richness of soil, say 30 bushels to the acre; and even that in many instances we see still in the field, for such is western farming.

Now curiosity may perhaps inquire for a description of this capitol. If I give one, it must be of briefer space than the scattering town of 3 or 4.000 inhabitants, who mostly occupy poor buildings, upon small, dirty, treeless, grassless, gardenless lots, upon long unpaved level streets, which are never very muddy, unless more than knee deep; which it is not improbable they should be, as the town is upon a wide plain of soft loamy soil, with no outlet for accumulating water, unless sent off "by the rail-road," which is so thoroughly out of repair at this time, that that would prove a poor sewer, except of the people's pockets.

This rail-road, from hence to Meradosia (65 miles) on the Illinois river, is another of the links of that endless chain that was to bind the State in love together, but has bound them in debt forever. It is already so dilapidated that mules have been substituted for locomotives, and as it fails to pay expenses, it must shortly go out of use for want of repair.

Another monument of by-gone Illinois riches, is the unfinished ill constructed State-house, built of cut stone, of a hard sandy limestone quality, at an expense of a quarter of a million of dollars. It is 60 by 120 feet, of two extremely high stories above the basement, (which is useless on account of dampness ;) and contains a hall for the 120 members that represent the 99 counties of the State, a Senate of 41 members, and a Supreme Court of 9 judges, which by some is thought to be supremely ridiculous; a very large library room with very few books, except Illinois lows, and office rooms for Secretary and Treasurer of an empty treasury, but is almost totally lacking in what is most wanted, rooms for committees. The masses of stone and half finished columns that lie around, the unhung doors and unplastered rooms, show that the work was suddenly checked at a point that shows the whole work was done upon "borrowed capital."

Of the members of the house I shall say nothing, except to beg you as you look upon and listen to them, not to consider them as a body, although large, a fair sample of the moral worth and intelligence of the inhabitants of the State. The appearance of the Senatorial body is highly respectable, and is presided over by one of the best presiding officers I ever saw; Col. Mattison, a Senator from Juliet, whose woolen factory I mentioned, I met with here, and owe to him my warmest thanks for every effort in his power extended cordially to me to further the object of my mission. I also was treated with great respect by many other Senators and representatives, who seemed fully to appreciate the benefits that would accrue to the agricultural community, if they could be induced to read good agricultural papers, and to talk, think and act upon the business of their every day life. I spent three days amid this congregated wisdom of Illinois, from which I hope some good may arise; and should have held a public meeting to talk to the few farmers in the Legislature, but I found that self-interest, party tactics, and Mormonism, so completely absorbed every other interest, that such plain common sense matter as improvement in agricultural pursuits, had no possible chance in such an excited community. Our friend Wright of the Prairie Farmer, was also at Springfield, engaged in a noble effort to get an improvement in the present very defective common school law of Illinois. An uphill business—reminds me something about casting pearls before a certain kind of animals.

There are a few good buildings in the "city," one of which is the defunct State bank, built of the same material as the State house, from a quarry about 8 miles distant—also a stone church. There is a large plow manufactory here, which makes about 2,000 a year, with wrought iron mould-boards, which are not equal however to those made wholly of steel at Chicago. There are two furnaces for small castings, that use iron from Tennessee, and coal to melt it with from Philadelphia; the coal of Illinois, which is abundant within a few miles, not being fit for that purpose.

This is an old and rich country, with good soil and timber, yet there is a great deal of uncultivated land. There are some orchards, but as the country has not been settled more than 20 or 25 years, people must be excused for not having fruit, as it takes a great many years to get that, when there are no trees set out.

As an evidence of the rapid growth of timber, I was told of one 80 acre lot that was cut off nine years ago, and will now afford fifteen cords to the acre, mostly oak. This kind of wood is worth about $1,25 a cord in Springfield. Wheat here, as well as all along the road from Ottawa, is worth about 50 cts., corn 20 cts., oats 15 cts. And every where through this part of the State, there is one universal cry of no money, and very poor crops for two years past, which I can readily believe, and will also add that they will be so for two years to come; for no system of farming like that almost universally followed here, will ever afford the farmer good crops. Although he may raise a great many bushels of corn, and keep a great many poor hogs, horses and cattle to eat it all up in the winter, which they must do for lack of any other kind of feed, he will still cry "no money;" and still go on in the same way, for he will not inform himself of a better system. His rotation of crops is corn, weeds, hogs, mud and corn. His reading, if indeed he happen to be one who reads at all, consists of a very brief insight of one book, and one well con'd paper of the one party in whom he places all faith. In such a community, better informed men are out of place, and all their innovations looked upon with jealousy, and their better success from better management, with envy.

On the morning of Jan. 16th, I intended to leave Springfield, but was detained by a thunder shower till evening, when I drove out on the St. Louis road over wet, uncultivated prairie, 5 miles to "Lick creek timber," an excellent body of good land, good farms and fine timber.

Notwithstanding this is an old county, that is old for this young country, there is an abundance of uncultivated land, and that too within gun shot of the capital. On most of the creeks and ravines, coal is found in abundance. The streams through this part of the State are sunk in deep hollows, and run between high, steep, muddy banks.

At a poor deserted looking village called Auburn. I met with a rare sight—an actual live nursery of well assorted fruit trees, cultivated by the Rev. Wm C. Greenleaf, a very worthy Presbyterian minister, whose talents not being appreciated sufficiently to support his declining years, has turned his well cultivated mind to the cultivation of trees, and for which he finds more persons willing to pay, than he does for preaching, which they prefer to have of a cheaper quality. Mr. G. is trying a hedge of native thorn; and will give the result when ascertained. Like all well educated gentlemen of his profession, he takes an active interest in agricultural improvement, and uses his influence to extend the circulation of agricultural papers. By his advice, I called upon one of his neighbors, upon a farm upon which he keeps 100 head of cattle, and a "right smart chance" of hogs, but they are dying with the kidney worm, and he made a "bad crap; it was so powerful wet in the spring that the crap got right smartly in the grass! and then again it got dreadful dry," and so with all these misfortunes, he felt too poor to subscribe for a paper. I hinted that if he had taken one, he would have found a receipt to cure the kidney worm, and thus have saved fifty dollars worth of hogs. But "he reckoned these ere papers told a heap of lies;" and so to save the poor man's conscience as well as hogs, I told him to give the latter sulphur, which if I had given him the medicine as well as advice, perhaps he would have done.

After leaving this fair specimen of a large majority of the settlers of this county, I entered just at sundown, upon a 20 mile prairie, intending to drive five miles to the first and only house, and spend the night; but as I approached, one unacquainted with such scenes, might have fancied that instead of a country tavern, he was nearing an army encampment; as it required no great stretch of fancy to convert a score of white wagon covers into tents, and the noise of a dozen families of emigrants, into that of a small detachment of "la grand armie." Indeed, such scenes in the west are by no means uncommon. There is one of the roads that enter Chicago, upon which I have seen 300 wagons pass in a day, and that not a rare sight, but one often seen.

Finding in the present case, that if I remained I must content myself with a very small portion of a bed, and my horses with a birth by the side of a rail fence, I soon concluded to "put out" and brave the terrors of a threatening snow storm upon a prairie 15 miles across, as upon the other side lay the town of Carlinsville, the seat of justice in Macoupin county. I am of opinion that if that fellow who is astonishing the "down easters," fiddling the "solitude of the prairie," had been with me this evening, that he would have been able to play the tune in much greater perfection. Perhaps he might add,

"Oh solitude, where are the charms
That emigrants see in this place;
Better stay on their own little farms,
Than own all this horrible waste."

And he might add another stanza to a lone tree standing solitary and alone in the midst of this ocean of land, like a sentinel watching alone over the solitude of the prairie, which is more profound than the solitude of the darkest forest.

No doubt many of my eastern readers would have hesitated long, and rather put up with lodging "three in a bed," sooner than undertake the passage of such a prairie in the night. But we soon get used to it, and as in the present instance, get through it in good order, and by contrast are able to reap double enjoyment by the side of a good fire in a good inn. The town of Carlinsville, like many others in the west that grew up like Jonah's gourd, when men forsook the cultivation of the soil to grow suddenly rich in town lot speculation, now shows in the dilapidated appearance of tenantless houses, that it would have been better for many if they had been content to pursue a steady, though slow, yet certain road to comfortable independence which surely attends the careful cultivation of a good soil.

During this day's drive, after leaving Carlinsville, I witnessed the rapid increase of timber that is every where taking place in the prairie country, where protected from fire. Though during the past fall, in consequence of the great drouth that followed the great flood, immense damage, not only to the young timber, but in the destruction of fences, has been done throughout the whole of my journey. And this drouth still continues, so much so that the few mills that are to be found in this part of the State, are almost useless, and settlers complain of "long trips to mill." The roads, even in the beds of streams that are sometimes impassible, (where bridges are not, and that is every where when it is possible to "get along" without them,) are dusty, and the land in fine order for plowing, though I perceive but little of it doing. And would you know why? Why, is it not winter? And who ever heard of plowing in the winter, in a country where we are above such vulgar business as working when we are not obliged to. And another reason is that most of the cultivated land is every year in corn, and much of that is not yet gathered, and besides the stalk fields are the main dependance of half the farmers in the country for wintering the stock. And under such circumstances, notwithstanding the favorable nature of the weather for plowing, if they even had a disposition to do it, they cannot avail themselves of the opportunity. But you will say they might be otherwise employed; getting up wood for instance. Beg pardon, but you don't know "our folks,"—they are waiting for sledding.

But there are many exceptions to this waiting kind of population, one of which I witnessed at Chesterfield in this county of Macoupin. There were not only orchards and barns, but beautiful groves of locust around the comfortable houses, at one of which I found a dairy of 70 cows; and at almost every house a file of the Cultivator or Prairie Farmer, a paper in high credit in this State. And reader, where do you think this intelligent and enterprising population were from: I shall not tell, but if you are a yankee, you can easily "guess." I found one of them busily engaged building a new barn, which he assured me he was incited to by reading my remarks upon the subject of the want of this indispensible farm building in the west. I hope my remarks, and the contrast that I shall exhibit to them between good and bad farmers, that I meet with upon my present tour, will also excite many others to make improvements.

And here is one example by way of contrast—I spent the night in the cabin of one who had become familiar with my name in the Cultivator, and felt great pleasure in extending a warm welcome to the best he had, to one he had long looked upon as an old acquaintance and friend. He is a physician, whose practice required him to keep two horses, and where do you think he kept them during the inclemency of a wintry storm? In the stable, do you say. Well, it was in a large one, then, which nature alone had any hand in building. For no other had he, and therefore in the morning, I had no scruples of conscience against bringing my horses out of the corner of the fence where they had spent the night, and hitching on to the carriage for a 14 mile drive over a bleak prairie, facing a south-east snow storm, to a little town in the same county called Woodburn, where I spent the balance of the Sabbath in very comfortable quarters for both man and beast. Now, I shall not mention the name of this really good man, though to us he has an odd way of showing his goodness to the good creatures created for his use, but that is all owing to his "brought'n up" in a section of the United States that "I reckon" you will not wish me to tell you lies south of that celebrated line of Mason and Dixon.

I found my host, (Dr. Grimsted,) a very intelligent Englishman, who, together with many of his countrymen of the same stamp, have settled in and about this place, which is located upon good prairie, scarce of timber, inconvenient to mills, and possesses rather too great a share of that kind of "go-day, come-day" population, which fill the southern part of Illinois with a class of men that are content to live not only without stables, but without many of the other comforts that constantly surround the cabin of the eastern emigrant; the contrast between which and their own, will do more to urge them forward to do likewise, than all the agricultural papers in the world; for them they never read.

Three miles from Woodburn, is the village or rather settlement of "Bunker hill;" where I found a monument as noble and enduring as that which overlooks the city of Boston. It is a monument of industry, enterprise and yankee persevereuce that has within a few short years converted a wide tract of rich rolling prairie, although not very convenient to timber or mills, into one of the most flourishing communities and highly improved farms that I have seen in the State. The location is undoubtedly a healthy one, well water convenient and good, but stock water upon the surface, I judge not so. There is more grass, more fruit trees, more barns, more good houses, more scholars at school, and more readers of agricultural papers in this eight year old settlement, than there is in some of the oldest settlements in the State, where the population is double.

I took dinner with Moses True, who is a worthy follower of his great namesake, in regard to perseverance, and whom I wish I could induce some thousands of his fellow-citizens to take as a pattern of the TRUE way to acquire a comfortable independence in the cultivation of the soil. He showed me a flock of 200 wedder sheep fattening for the St. Louis market, 40 miles distant. He intends fattening about this number every year, as he finds it one of the most profitable of his farming operations. His flock consists of about 800 at this time. I have also noticed several other flocks to-day, and also a disease called the sore mouth, which is affecting several flocks. If you will publish a cure if known, it will oblige many in this part of the country. In the course of a two hours drive after leaving this place, where every thing looked as though created but yesterday, one might suppose that he had indulged in an unconscious nap, and awaked in "the old settlemeets," so great is the change. For here we are amid old buildings, old farms and orchards of old trees, one of which, containing 1200 bearing trees, (owned by Gershom Flagg, Esq., brother of your Comptroller of State,) upon a large and excellent farm in Madison county, 30 miles from St. Louis, where he has resided 27 years, 25 of which in the same log cabins, which are his castles still, and in which I met a kind of welcome not to be measured by outside appearances. He has about 500 acres in cultivation, and is still adding more; and keeps about 100 head of cattle, with horses and hogs to match. His orchard of excellent grafted fruit brings him in some $2,000 a year, most of the fruit of which he sends to New-Orleans. He keeps 10 or 15 yokes of steers at work, which, as soon as he gets well broke, are offered for sale, and bring remunerating prices. He is reputed so, and is undoubtedly rich, and I will also add, proud. But it is proud of living so long in a house that has been of so little expense to him. All of his out-buildings, and they are very extensive and convenient, are of the same primitive description. Indeed, he says that he has never used a brick or shingle upon the place, but if I may judge from appearances, he is now preparing to do so shortly. He is not waiting for sledding. Every thing around him is on the go-ahead principle, except the house, and that is going to decay. And when we look abroad over the towns, cities and farms extending hundreds of miles away to the north, and think that this very house when built, was the "frontier settlement," the very outpost of civilization, it is easy to imagine that it is time for it to pass away. At the time Mr. Flagg settled here, he was looked upon by his neighbors in the "thick woods," as little better than a crazy man to undertake to cultivate the prairie, when it was evident it would not produce crops, otherwise it would have produced timber.

Over a rough uncultivated tract, mostly timbered, I went to the somewhat famous town of Alton, or rather towns, for there are three of them, Upper, Middle and Lower; and all covering as rough and uneven a surface, extending up mountain sides, and back a mile or more over other mountain sides, from the river, that part being Upper Alton. Here is the college, several good churches and fine dwellings, but no mercantile business. Middle town is a collection of good dwellings, mostly occupied by men doing business in the lower town. Here I noticed a dwelling surrounded with a garden in high cultivation, a plain indication of the owner's mind, who I found on acquaintance, though engaged in other pursuits, highly interested in agricultural improvement, and whose name, Moses G. Atwood, will call to the mind of Mr. Tucker, reminiscences of the days when they were both sticking type away down in New-Hampshire.

At the lower town is the Illinois penitentiary, several fine churches, one busy business street—there is no room for a second one—and a tavern, the Franklin House, that is worthy of patronage From

Alton to St. Louis is 25 miles, down the far famed American bottom—an immense tract of land that was covered, and in some places greatly injured, by the great flood. But it never was under that kind of a state of cultivation which would satisfy any man who had an aspiration above a "hog and hominy" kind of existence, and was willing to have the "shakes" half the year, for permission even to enjoy that much. I believe I met with a fair sample of half of the inhabitants, in an individual who had lived upon the same farm 40 years, and has not an acre of grass or fruit tree in the world, but can brag of raising more and bigger corn than all the rest of creation, "Old Kaintuck" included.

I asked him why he did not raise grass? "Well, he did sometimes think on't—and he tried it about 30 years ago, but it did'nt do well." And why don't you set an orchard? "Well, I reckon may be I will some day—did set out a few trees once, and they grew powerfully, but the cattle soon destroyed 'em." And no wonder, for they were set in "the big field," the eternal corn field. Fences are much swept away, and probably the barns with them, for they are not to be seen now, although the little old miserable dwellings, like the owners, hang on. The land in many places is much grown over with bushes, mostly crab-apple, which abound by the million. The bottom is nine miles wide, and is bounded on the east by a very high clay bluff, that bears evident marks high up its face, that here once run a mighty current. There are also many mounds upon the bottom that show the same appearance, and that the stream gradually wore down this immense mass of clay to the present level.

During the flood, the ferry was nine miles wide; now less than a ninth of that, which I crossed upon the 22d of January, 1845; on a steam ferry boat, and upon a beautiful sunny day as we need wish for in May. The two boats at this ferry are almost constantly crowded with produce and market wagons from 60 or 70 miles back in Illinois, coming to St. Louis. The old part of this city was built upon an abrupt rocky bank, and in addition to its outward wall, many of the old Spanish houses were separately walled in like a strong fortification. Some vestiges of these, and the old Spanish houses, still remain, but are fast giving way to the spirit of improvement, every where visible. But the town suffers one monstrous inconvenience in the narrowness of the streets. Some of the main business streets being barely wide enough to allow two wagons to pass. It is a place of immense businesss, constantly on the increase. The lead and fur traders alone employing great capital, and the vast agricultural country above, that draws its supplies through this place, create a vast trade.

The land around the city is not under good improvement; which is probably owing to the want of good title: much of it being an old Spanish grant for a public common. All the land between the city and Jefferson Barracks, and even below, is in the same condition, being claimed as a common of the town of Carondalet, a little miserable collection of old Spanish or older French houses, a few miles below St. Louis, and is one of the oldest French towns in the west. This common land remains unsettled, and the timber having been cut off, is now grown up to bushes; and in the vicinity of such a city has a very unsightly appearance. Jefferson Barracks, by the expenditure of a few wagon loads of Uncle Sam's money, has been made a beautiful spot amid this wilderness of Spanish spoliation and French frivolity, both of which classes had rather live on frogs and tobacco, and spend their time in drinking and dancing, than in growing rich by the cultivation of the earth.

The old Spanish and French citizens in St. Louis, for a long time successfully resisted the spirit of improvement that pulls down to build up; and the old grants of land to this class of citizens, some of which are still unsettled, have been a great detriment to the improvement of this part of the State of Missouri.

From St. Louis to the Merrimac river, 18 miles, the road lies over a succession of clayey hills, and for 14 miles after leaving the city, scarcely any improvements, and them but poor. Soon after crossing this stream, we begin to enter the great mining district of Missouri, and find ourselves climbing rocky mountain sides, picking our way along some mountain stream that winds between high precipices of perpendicular rocks. Oh what a change. What a contrast from the boundless and comparatively level prairie, where the eye found no limit but the horizon, to this pent up prison of rocky grandeur.

The prairie land behind me lies,
  That boundless realm of grass and hay.
The mountain rocks before me rise,
  With nought to cheer my toilsome way.

Yes, I have something to cheer me on my way; and that is, that what I see and take note of, may give pleasure to those, who in imagination, accompany on his tour, their old friend,

SOLON ROBINSON.

SWAMP WILLOW—BASKET WILLOW.

Salix discolor—Salix viminalis.)

"Some trees their birth to bounteous nature owe;
For some without the pains of planting grow.
With osiers thus the banks of brooks abound,
Sprung from the wat'ry genius of the ground;
From the same principles, gray willows come,
Herculean poplars and the tender broom."
[Dryden's Virgil, Georgic 2d.]

Permit me, Mr. Editor, to resume the subject of the Willow, commenced in the April number of the Cultivator (for 1844, page 125.) My attention was called to it by the suggestion of Mr. William Partridge of New-York, one of your correspondents.

In my former communication, it was shown that the native and foreign willows were cultivated and manufactured in this country to a considerable extent and that the wild and uncultivated article was also collected and applied to useful purposes.

Many [illegible] employed in the domestic fabrication of willow-bask[illegible]low-ware, while a few only are engaged in cultivating it. It is a business that may be increased to an indefinite extent, and give employment to many an industrious person. When the art of making baskets from willow, is once acquired, it requires but a small capital to commence the trade. With a few tools, a few bundles of willow, and a small space to work in, an individual may easily undertake to work on his own account. The most expensive apparatus would probably be a tight box to soak the willow in, that it may be easily bent and twisted in the manipulation of the art, and another box with a tight lid or cover to bleach the manufactured articles. The bleaching is effected by subjecting them to the fumes of burning sulphur, a small portion of which is put in an earthen pot and placed in the bottom of the box, and the lid closed to prevent the escape of the sulphurous acid which is formed by the slow combustion of the sulphur, and which whitens the willow.

In the conversion of willow into articles of utility, we have an art, a trade, or domestic manufacture, which deserves encouragement, because it may be carried on in the small way, and because we have abundance of the raw material growing wild, which may be collected at little expense, or may be propagated by cuttings, in waste swampy lands, without interfering with any other trade or employment. That the art of basket-making is not difficult to acquire, we have the evidence presented at the late Fair of the State Agricultural Society at Poughkeepsie, (Sept. 1844,) where a number of articles of basket-work, made of American willow by the pupils of the New-York Institution for the Blind, were exhibited. Had there been any other articles of the kind offered for a premium, those made by the Blind would have advantageously compared with them in beauty of finish and workmanship.

They were entered in the name of the "New-York Institution for the Blind," by Mr. George Horn, teacher of basket-making, as the work of the following boys, pupils of the Institution:

1 Fishing basket,..................	made by	J. Collins.
I Chair,..........................	"	Chas. O'Connor.
1 Nest of knife baskets,.......... 1 Nest of market baskets,........	"	James Dowd.
3 Clothes baskets,................	"	Alfred Holmes.
2 Toy wagons,..................... 1 Foul clothes basket,...........	"	Wm. Dunlap.
1 Bandbox basket,................	"	Thomas Murphy.

These were all declared by Mr. Horn, to have been made entirely by blind boys, and of American Willow. We are informed by one of the Committee on Discretionary premiums, that the articles arrived towards the last of the Fair, and when the Committee were about closing their report, and that as there was no competition, one dollar was awarded to each of the above named pupils as an encouragement to them, to persevere in an employment which promises to be so useful to them, and is so creditable to the Institution where they are taught.

Seeing these articles at the Fair, led us to make some further inquiries about willow and the willow-basket business as carried on at the Institution for the Blind in the city of New-York. We were informed that one of the trustees or managers of that charity, was many years since impressed with the conviction that American willow might be advantageously employed in making baskets and other willow-ware. In August, 1834, he was on a visit to Mr. John R. Stuyvesant of Hyde Park in Dutchess county, and he observed a quantity of the native willow growing wild in a piece of wet ground on the farm of that gentleman. He amused himself by cutting and peeling the bark of the long and slim sprouts, until he had collected two bundles, and sent them as a present to the Blind Institution for trial, through Mr. Stuveysant, who was at that time one of the Board of Managers. Two large baskets were made of the said willow and sent to Poughkeepsie to show that we had the raw material for a new and useful employment. But the teacher of basket-work at that time in the Institution, (Wm. Murray, himself blind,) stated that the willow was good, as to length, smoothness, and uniformity in its taper, but brittle, on account of being cut in the wrong time of the year. It should be cut, he said, in March or April. This agrees with the fact as stated in our former communication, and as practiced on Staten Island by Mr. Reed, Mr. Leveridge and others who cultivate the native and imported varieties.

When one undertakes to investigate a subject, one fact leads to another. So when we were made acquainted with the above, we were presented with a series of the annual reports of the New-York Institution for the Blind, from which, and one of the managers, we have drawn the following information in relation to the manufacture of willow.

In the early stage of the Institution, under the superintendence of Dr. John D. Russ, the first attempt in working with willow, was in covering bottles and demijohns without assistance or previous instruction. The ingenuity and contrivance of the superintendent was partially successful, but slow in its operation. A basket maker in the suburbs of the city was then consulted, and he agreed to give the blind inmates of the Institution, instruction in the art, a portion of a day three times a week. He came at the appointed time, but declined the undertaking, alledging that he would be mobbed by the trade if he should comply with the proposition.

Mr. Windle of Maiden-Lane in New-York, who deals largely in wooden-ware, willow-baskets and house furnishing articles, informed Dr. Russ, that his only chance to obtain the requisite knowledge, was by engaging some foreign artist soon after his arrival, and before he had become connected with others of the trade.

Such a person was subsequently engaged, together with his wife. They were adepts in making fine work of split willow, which would come in competition with the fine baskets imported from France. Although they were engaged at high wages, they remained but a short time, being induced to quit their employment and instruction of the blind, for a promise of still higher wages in another part of the country. They afterwards returned to New-York, and expressed regret at having relinquished their first engagement, as they were not fairly dealt with by those who enticed them away; but the Institution was otherwise supplied in the art of basket-making, and they could not be re-engaged. This information is not in any of the published reports, and is preliminary to understanding some of the following extracts, from which we shall see the progress of the willow basket manufactory, at the New-York Blind Institution.

Their first annual report to the Legislature for the year 1836, informs us (p. 5,) that

"The managers finding much difficulty in establishing mechanical employments, in the early part of the year wrote to Edinburgh, and engaged a competent instructor, who arrived the latter part of October 1833, and enabled them to undertake the manufacture of mats, mattresses and willow baskets."

In December following, there was an exhibition and exercises by the blind at the City Hotel in Broadway, at which was made the following statement:

"In the mechanical department, the managers after trials and difficulties of various kinds, have the pleasure to announce that they are now well supplied with a conductor in the efficient services of Wm. Murray, a young man who is himself blind, and who knows how to bear with patience the awkwardness of beginners in acquiring those trades to which he has been brought up in the school for the Blind in Edinburgh, and a knowledge of which he can impart to others in his own condition. This acquisition is the result of a correspondence with the directors of that Institution in Scotland. Murray arrived a few weeks since, and he has already given practical demonstration of his ability in making baskets, mats and mattresses, specimens of which may here (at the City Hotel. New-York, Dec. 1833,) be seen, made by him, and the pupils under his direction."—(1st Annual Report, p. 7.)

In tracing the progress of the mechanical department of the Institution for the Blind, we learn that the articles manufactured and sold there in 1836, amounted to $1,295.58, of which $444.56 were for willow-baskets, (Report, p. 15,) and that there was on hand at the end of the year a considerable amount of basket-work finished, together with 120 bundles of foreign willow, which cost one dollar per bundle.

The business of basket-making having become firmly established at the Institution, the committee on manufactures reported at the close of the year 1838, that there had been made during the year, 1722 baskets, and numerous chairs, cradles, band-boxes, &c., and that they had on hand 675 bundles of willow as a stock of raw materials for the ensuing year. The committee say, that

"In the manufacturing of these articles, the committee have been guided solely by the good of the pupils and the Institution, as they cost less to get up, and when done, find a ready sale. The pupils are very anxious to become proficient in this manufacture, as they know when the time arrives for them to leave the Institution, they can, if proficient, start the willow-basket business with only a few bundles of that article, and can make for themselves a good and comfortable living. The articles manufactured in this department will compete with those made by workmen not deprived of sight."—(3d Report p. 20.)

In the sixth annual report it is stated (p. 18) that, "Two male pupils lately (that is in the latter part of 1841) left the Institution and removed to New-Orleans, and two others to Chenango county in this State, with the intention of manufacturing willow-work; they understand the business thoroughly and will be enabled to earn their own living."

In our former communication on this subject, it was shown that large quantities of willow raised in France and Holland were imported into this country, while we have it growing wild in abundance, that it may be. and has been cultivated by a few, together with several varieties of foreign growth. The manufacture of willow was also stated to be of two kinds, one made of fine split willow. and one made of the willow twigs without splitting—that the fabrication of fine willow-ware was in the hands of foreign artists and was wholly imported; while our own artizans could produce as good, but from cheap labor in Europe, and defrauding the revenue as is believed on importing the articles, our countrymen could not compete with them, and that accordingly they had the control of the market in the sale of fine and fancy willow-ware. But on the other hand, Americans have the domestic market to themselves, for large and coarse willow fabrics, because on account of lightness and bulk, they cannot be imported.

In this essay it will be seen that the blind even, can be taught to work correctly and profitably at this business, that it is a trade of extensive usefulness and great magnitude, that the raw material is abundant and may be improved by cultivation, and foreign varieties added to our native stock, and while we are cultivating willow, those so engaged are benefitting themselves and improving the country, because swampy lands and peat bogs when drained, are the places where willows grow most luxuriantly.

Now I would ask, ought our own countrymen to be excluded from their own markets in the manufacture of fine split willow? For one, I should be for imposing such duties as to give them protection against the introduction of fine willow-ware. Independent of political considerations they ought to have it, because the art is truly a manufacture, every thing is done by hand, and cannot be done by machinery, and the business must be pursued by individuals, and cannot be monopolised by large companies. By encouraging the manufacture of willows, we invite the farmer to a new article of culture, and the conversion of swamps into willow groves, which will give profits equal if not superior to uplands, and at the same time improve and render healthful such swamps and low lands, which before produced agues and fevers, and their train of evils.

In our former communication, we omitted to mention that great numbers of square willow baskets with lids. are made in New-Jersey and filled with bottles of fine Newark cider, marked and sold in New-York as foreign champaign.

If any person should be desirous of commencing a plantation of willows, it may here be repeated that March or April would be the time to transplant them, and that Mr. John Reed, who lives in the township of Southfield on Staten Island, about five miles south-west of the Quarantine establishment, can furnish cuttings of the best foreign varieties, or those of indigenous growth improved by cultivation. RICHMOND.

Oakland Farm, Staten Island, Nov 4th, 1844.

FLAX CULTURE FOR THE SEED,

And for seed and lint—its effect on the soil as preparatory for a wheat crop—Flax Mill—Flax pulling Machine, &c.

EDITOR CULTIVATOR—The culture of flax for the seed only, has been found to be a very profitable branch of rural economy in Seneca County. Flax culture on our clay loams, has the effect to keep the soil loose and porous, so that after the flax is gathered, the stubble needs only half the working necessary to fit an ordinary fallow for wheat. It is the opinion of many sensible farmers, who do not on that account, grow flax, that a flax crop immediately followed by wheat, is too exhausting to the soil for economical husbandry; *per contra*, it is stoutly maintained by others who have successfully grown wheat after flax, that if the soil has not been previously too much worn, wheat will succeed better after flax, than on the summer fallow. It is true that the gluten of the stem and seed of flax, presupposes a great assimilation of azotized matter; but the action of the roots of the flax plant on a tenacious soil, seems designed by nature to fit that soil for the reception of ammonia, for which we are told allumina has a great affinity; thus nature has given to that plant which requires much nitrogen, the mechanical structure of root, to fit the soil to absorb the constituents of nitrogen and carbon from the atmosphere. The quantum of inorganic matter taken by flax from the soil, (not having seen the analysis,) I am unable to determine; but it is well known that of all the cereal grains, wheat contains by far the greatest portion of these substances, its straw alone yielding nearly four times as much ashes as the straw of oats, and twice as much as that of barley. Hence, may we not infer that it is to the previous exhaustion in the soil of its wheat forming pabulum by previous wheat crops, and not to the alternation of an occasional flax crop, that the wheat product is deteriorated.

About four years ago, a mill for breaking and dressing flax was erected in this village, (Waterloo.) The enterprising proprietor, Mr. Gardner Wood, has induced many farmers to pull their flax, and to dew rot and save the lint; instead of pursuing the old course of cutting up the flax with the scythe, and appropriating the seed only. To encourage a more general pulling of the flax in order to save the lint, Mr. Wood has procured from the patentee in New-Jersey, a flax pulling machine. It is of wood and iron on low wheels, about the bulk of a small wagon, cost $90, with the right to use it. With the help of this machine, four men have pulled and bunched sixteen acres of flax in four days; but as the machine requires some mechanical tact, and can only be used on a smooth surface, most of the flax intended for dressing, is still pulled by hand.

The success of the Seneca county farmers in making a flax crop a succedaneum for the sun stricken fallow, has induced many farmers in the neighboring counties to adopt its culture. In the town of Hannibal, Oswego Co. a flax dressing mill has just been erected, which will dress this season about 20,000 lbs. of clean flax. Mr. O. Gifford, of the same town, has grown the past season on five acres of land, 58½ bushels of seed, and 1,750 lbs. of dressed flax; the flax netted him 5 cts. a lb., the seed 9 shillings a bushel. A. Taber, of Ira, Cayuga County, has harvested the past season, 18½ bushels of seed to the acre on nine acres; the lint of the same yielded about 2,500 lbs. of clean flax, worth at tide water, nine cents a lb. The land on which the above crops were grown, was Indian corn stubble, plowed once in the spring, harrowed and sowed late in April, with three pecks of seed to the acre, and harvested as soon as the balls began to change color, which, last season, was about the 20th of July, two weeks earlier than in ordinary seasons. The field of Mr. Taber had never received any animal manures; it was on one of those all fertile alluvial ridges of finely divided matter, so common to the gravelly or rather pebbly loams of the north part of Cayuga, Seneca, and the south division of Wayne county. S. W.

Waterloo, Seneca Co. N. Y., Feb. 21, 1845.

MERINO BUCK "DON HARDY."—(Fig. 39.)

DESULTORY SKETCHES OF SHEEP HUSBANDRY IN MAINE.—No. I.

Mr. Editor—Little was done in regard to the rearing of sheep in Maine, except a few of the common breeds, kept by some farmers for mutton, and to supply what wool was needed for household manufacture, until the war between England and the United States, which took place in 1812.

It was, however, early discovered that the climate, though rigorous in the winter, was nevertheless favorable to the breeding and multiplying this useful animal. The war of 1812 brought about a radical change in this branch of farm industry among us; and I have sometimes thought that setting aside the misery and aggravated wretchedness which war always produces, if no other benefit was derived from the struggle, the impulse given to wool-growing, and the more general introduction of Merino sheep throughout the country, together with the improvement of manufactures, was an ample equivalent for all the treasures expended. The total prohibition of the importation of English manufactures which it effected, brought about in the short space of three years, more changes in favor of our then infant manufactures, and discovered to ourselves more resources, both natural and mental, than could have been accomplished by any other means. It is true that a speculating mania in Merino sheep, which sprung up about that time proved somewhat disastrous to many who were lured into it more by the hope of realising a fortune by the rise of prices than from any desire of the multiplying of flocks. But this was only one of the evils which often attends the introduction of valuable improvements, when the true objects are perverted. Those who purchased at high prices, with a view of going into the business as a permanent pursuit, ultimately realized a profit from the investment, and many are still reaping the benefit of their purchases. A friend of ours gave forty dollars for a buck lamb that had just been dropped, brought it home and reared it as a cosset. It made a noble sire of a noble flock. A farmer, who now has an excellent flock of fine wooled sheep, told us that he began by giving *one hundred dollars* for an old sheep that had hardly a tooth in her head, but she lived, by extra care, long enough to lay the foundation of an excellent flock, which has been a source of profit to him for many years.

As early as 1813, a few farmers in Winthrop, among whom were Messrs. S. & E. Wood, Mr. Pullen and Dr. Snell, met together to discuss the question of the introduction of Merino sheep into Maine. There were but two questions to settle.

1st. Will the climate suit them?

2d. Will it be a profitable investment?

After a careful deliberation, they concluded to try the experiment, and accordingly made, what at that day was considered a large purchase from the flock of Consul Jarvis, who had then recently settled in Weathersfield, Vt. The first purchase was made in 1813, and consisted of forty lambs, for which they paid *twelve dollars and a half* per head. The next purchase was made in 1814, and consisted of forty lambs, for which they paid *twenty-five dollars* per head, and the next purchase was made in 1815, and consisted likewise of forty lambs, for which they paid *fifty dollars* per head, showing a pretty steady increase of prices. Wool at this time, of the quality which these sheep afforded, brought *two dollars* per lb. The increase of the flocks, and the peace of 1815, put an end to the high prices; and many, who, as I before said, had entered into the business merely for the purposes of speculation, gave up the pursuit, and after cursing the harmless Merino as the cause of their misfortunes, turned their attention to other business.

The enterprise and example of Mr. Jarvis, was not lost upon those whom we have mentioned. His and their experiments, demonstrated the fact, that the climate of north New-England was suitable for the cultivation of fine wooled sheep.

The cold, but dry and bracing air of our winters, is found much more congenial to the Merino, than the more open and changeable winters further south; and it is proved by actual experience that they do vastly better in dry, cold, than in a wet or rainy climate.

This was peculiarly illustrated here during the last winter, which, for a part of its term, was unparalleled for the severity of its cold—the thermometer sometimes ranging as low as 37 deg. below zero. It was comparatively a dry winter, the storms being principally snow-storms, and there fell but little rain. In the spring, the snow went off gradually by the heat of the sun. Notwithstanding the severity of the winter, sheep, and especially the Merino, seldom have done better. We noticed very particularly the several flocks which we passed in our drives about the country in the spring, and were forcibly struck with their general health and good condition. The winters of 1829-30-31, were what might, with propriety, be called open winters. Much rain fell during those seasons, and the mortality among the sheep is too well remembered by many of our farmers. Several of our acquaintances, discouraged by their losses, gave up the wool-growing business entirely.

Allow me to say here, by way of digression, that I think our brethren of Illinois, who are just entering so zealously into the wool-growing enterprise, will find their open rainy winters the greatest enemy to the flocks which they have lately introduced, and I would respectfully caution them to be sure and have shelters for them to flee to during a "stress of weather."

Sheep should certainly be sheltered during cold rain-storms, as these are found to be much more deleterious to them than snow-storms. The former drenches their wool and chills them. They become completely "water-logged," as a sailor would say, and it takes them a long time to get dry again, but a snow-storm does not so effect them. Drifting snows may bury them up and smother them, but they do not chill them so thoroughly, nor bring on so many diseases of different kinds as cold rains do.

The summers in Maine are generally clear and fine, and the situation and face of the country are such that the heat of our longest days is tempered by cooling and refreshing breezes, which invigorate instead of relaxing. No better pasturage can be found in the known world for sheep, not even in old Spain itself, than are found in the highlands of the interior of Maine. The ranges of hills and mountain tracks which traverse the State, afford cool and airy walks peculiarly adapted to the nature of this animal, and they seem to delight in climbing over their tops and roaming along their sides in pursuit of the herbage and shrubbery of which they are naturally so fond.

Hence, but very little care or attention is bestowed upon our sheep in the summer. The principal object being to get a pasture for them of the kind best suited to their natures, and occasionally giving them a little salt.

As we have before observed, the peace which took place in 1815, put an end to the great profits which were realized by Merinoes and many who had large flocks, and others who were commencing, sold them to the butchers, and relinquished the business. A few however, knowing the intrinsic value of the animal, have persevered in the breeding of them, and although perhaps no single branch of husbandry has been subject to so many fluctuations for the last thirty years, yet we believe that, by taking an average of costs and profit during that period, they have been full as profitable (if not more so,) as any other species of farm stock.

The breeds which are now found in Maine, are the Merino, including the Saxon variety, the South Down, the Dishley and the Native. While making this enumeration, truth compels me to say that there are but few flocks which can be considered really of pure blood. We will however speak of them in the order we have named them.

1. *Merino.* The Merinoes first introduced were principally of the Paular variety, though some of the other varieties were occasionally found. They were much better in form, and of course, constitution, than many that are now found here. The causes of this deterioration are—1st. A want of attention in breeding. Every thing and any thing in the form of a Merino were kept for this purpose, and a long course of *in and in* breeding, reduced the once good shape to a thin breasted, flat ribbed, hump-backed race. 2d. An unfortunate cross with some inferior Saxony blood, introduced about the years 1825–6 helped to deteriorate many flocks. With one or two exceptions, the Saxony bucks introduced among our Merinoes, were ill-shaped animals, and instead of benefiting the Merinoes, they very much injured them. It is true they made the staple a little more fine and soft, but they proved to be poor nurses and destitute of that robust constitution which insures a profitable flock. A few farmers, instead of adopting the haphazard course, have pursued a regular system and avoided the evils arising from what may be called an incestuous intercourse. They have taken the utmost care in selecting and preserving the best of their sheep, and instead of condemning the whole Merino race as weak and worthless, unsuited to our climate, have improved them very much, and are in possession of as good flocks as can be found in America. Among those of our acquaintance who have pursued this rational course, I would mention Elijah Barrell, Esq. of Greene, Elijah Wood, Esq. Truxton Wood, Oaks Howard and Nathan Foster of Winthrop, Amasa Tinkham, Esq. of Monmouth, Capt. Geo. Williamson of Pittston, Jesse Wadsworth, of E. Livermore, Moses Taber of Vassalboro. Mr. Rial Gleason of Farmington, has a large flock, principally of Saxon blood. Hon. Judge Hayes of S. Berwick, has Saxonies of his own importation. Many others have large and valuable flocks, but the foregoing I am more or less acquainted with.

Messrs. Wood, Foster, Taber and Williamson, have recently made purchases in Vermont of lambs descended from Mr. Jewett's ram Fortune, which, though mocked at by some as not being an exactly *simon pure* Paular, will nevertheless bear the ordeal of the curious and critical in *stock heraldry.* He is certainly a remarkable animal himself, and transmits his good points and qualities singularly well to his posterity.

The average weight of the Merino fleece in Maine, is *three pounds;* but there are flocks that come up to four pounds and more. They are however, not very plenty.

Among the flocks of the few who have paid proper attention to the improvement of Merinoes, are to be found some fine specimens. The cut at the head of this article is a portrait of "Don Hardy," a full blood Merino buck, six years old, bred by Moses Taber of Vassalboro. He is an excellent animal and combines as many good points as any other buck. He weighed on the first of June last with his fleece on, 140 pounds. He was sheared soon after, and yielded ten pounds of well washed wool. The staple is long and of excellent quality. His height at the time he was weighed, was two feet three inches. Girth (wool being on,) four feet.

The cut represents him straighter under the belly than he actually is, and his muzzle or nose is rather too large.

We have seen in Mr. Williamson's flock, in Pittston, a variety of Merino, that were polled or hornless, and had uncommonly small ears, supposed by some to be of Saxon origin, the fleece of very fine staple, not so gummy as the common variety, and the form excellent. I will obtain a more particular history of this variety, and tell you more about it in my next. Respectfully yours,

Winthrop, Feb. 1845. E. Holmes.

A PRODUCTIVE FARM.

Mr. Tucker—I am doing a little in the way of farming, my time being occupied almost entirely in my professional duties. I cultivate 25 acres of land, keep two horses and 4 cows; raise all my beef and pork, with plenty of poultry and eggs; keep the variety of fowls called the Italian or perpetual layers; they certainly exceed any thing I ever had for eggs. If I was furnished with a cellar, which in my location cannot be had, I believe they would lay as well in winter as summer. I feed with all kinds of grain, with animal food and lime. The past year I raised 500 bushels ears of corn, with a sufficient supply of broom corn for family use—70 bu. oats—40 bu. wheat—150 bu. potatoes—75 bu. sugar beet and turneps—5 bu. winter beans—4 bu. clover seed—plenty of provender for my stock, and 3 or 4 tons of hay for sale; pumpkins, squashes, &c. in abundance. My practice is to have a good supply of milk and butter all the year, winter and summer, by the use of the sugar beet in winter; an abundant supply of apples of the best quality; a large garden and vegetable patch, supplying abundance of grapes, strawberries, raspberries, currants, and garden vegetables, with cherries, quinces, peaches, &c.

I find it quite important to attend carefully to the manufacturing of manure. The best manner I have found is to keep my yards and pens well supplied with muck, scraping of ditches, sods and the like, to catch and retain all the leach and urine.

Much has been said on the manufacture of poudrette. My practice is to have a good sink under my privy, with a heap of muck or something of the kind laying near; into this sink I cause to be cast all the soap suds, &c. from the house, and occasionally throw in some of the dirt. Once a year clean it out, with no inconvenience whatever. In this way I have 8 or ten cart loads of the best material for top dressing for any crop. My coarse manure from the horse stable, I throw into the pig pen, thus increasing its value nearly one-half. I stable my cows carefully during the winter.

You will perceive my doing is in a small way, but I go on the principle of doing well what I undertake. I have always practiced deep plowing, with decided benefit. Many years before I saw an agricultural paper, I employed one of my neighbors to plow the first acre I ever owned, and miserably poor it was. I urged him to put in the plow. Said he, "you will ruin your land." My answer was, it is now good for nothing on the top—if it is any better below, I will have it up. The consequence is, that now, with the little care I have taken, I have a lot with deep soil, that will grow any crop I put on it. I have done much at blind ditches filled with stones, thus reclaiming many spots that were before useless. I have never used the sub-soil plow, but have a high opinion of it; I intend to try it this season if I can. Mine is a hard retentive clay subsoil, which doubtless would be much benefited by being broken up.

C. OSBORNE.

Westfield, Essex co., N. J., Feb. 5, 1845.

ROTATION OF CROPS.

MR. EDITOR—It is indeed a matter of astonishment, that at this day after so great improvements have been made in agriculture, and so much light thrown upon the subject by scientific men of almost every country, any should be found, who will not give assent to the doctrine of rotation; or who will not admit that a judicious system of alternation of crops should be adopted by every one who would cultivate the earth with success. Yet it is no less true than strange, that there are thousands who still cling to the old way of cropping their fields continually with the same kind of grain or plant, until they hardly make a return of the seed they have received. To such men, farming will prove to be a sinking business. These too, are the very men whom we always hear finding fault with their crops, and almost charging the Wise Dispenser of all things, as being less favorable with them than with some of their more wise and prudent neighbors. They do not once think, that they have violated the laws of nature, and placed every obstacle in the way of her performing her kind offices. The truth is, they have tired out the land. It has become exhausted of the specific food which the plant requires, and utterly refuses to produce. Such farmers may sow, but they cannot reap; and if they persist in this ruinous course, they must sooner or later feel the evils of an empty purse. No man ought to expect a return for his labor, unless he give back to the soil, in some form, a part at least, of what he takes from it. It is to obviate in a great measure the evils consequent upon the practice of taking all, and returning nothing to the land, that is proposed to be effected by the rotation system. We do not say, that none of those who follow the old and hackneyed path, have raised large crops, or been in a degree successful in the business of farming; on the contrary, we know that by heavy manuring and high cultivation, land may be made to produce one kind of grain, perhaps abundantly, for a number of years in succession. But we do say, that the soil cannot without great expense of labor and manure, produce two or three crops of a kind without a perceptible falling off in the product. Neither is it contended that manure can be dispensed with in the rotation system. But one manifest advantage which this system has over the other modes of cultivation is, it enables the farmer so to economise in the management and use of his manure, as that he may receive a two fold benefit from it. For instance, his manure may be applied in an unfermented state to roots and other hoed crops, and they receive their supply of nourishment from it, and at the same time it remains unimpaired for the use of the small grains that succeed. We will now proceed to state a few general principles on which this system is founded. And they are principles that are established by scientific investigations and experiments, and should be familiar to every one engaged in this most laudable pursuit.

And 1st. Soils, however fertile, or highly cultivated, will lose their productiveness, if continually cropped with the same kind of plant.

2d. The degree in which a plant impoverishes the soil, depends much on the amount of food it returns to it, in the decomposition of its stalks and roots that remain.

3d. One plant draws its nourishment from a depth in the ground, another from the surface.

4th. Some plants receive nearly all of their food from the earth, while others are fed almost wholly from the atmosphere.

5th. The cultivation of the small grains, renders the land foul; the hoed crops tend to free it from weeds.

6th. Those plants that are permitted to ripen their seeds, are great exhausters of the soil; while those that do not mature their seeds, exhaust it comparatively little. If these principles are founded in truth, they will serve us as a guide in arranging our different crops of grain, roots and grasses into a regular system of rotation. In making choice of crops to alternate with, care should be had to select those that are best adapted to the soil. In this, the judgment of the farmer will enable him to decide, as he is best acquainted with the nature of the land that he cultivates. It will also be an easy matter for him to determine which kind of plants should, and which should not succeed each other.

In conclusion, we would say that a system, whose operations conform so completely to nature's laws, and the effects of which are so well calculated to improve the soil, and the condition of the farmer, commends itself to the consideration of all. And it is to be hoped that this subject will receive that attention which its importance demands. A SUBSCRIBER.

Livonia, N. Y., Feb. 1845.

SHEEP'S TAILS.

MR. EDITOR—In consequence of what was published in the 8th volume of the Cultivator, from Messrs. Morrell and Bliss, on the subject of sheep's tails, I determined to let my sheep wear theirs, till I satisfied myself whether Mr. Morrell's objections were real, or only imaginary. I had lived to see the fashion of maiming horses, hogs and dogs, in that way, become almost obselete, and was not sure but docking sheep, might be dispensed with also; although I had many doubts on the subject. I remembered having read that naturalists insist that the works of the Creator are always perfect and peculiarly adapted to the purposes they are intended to subserve; still I could hardly believe, but that a long tailed sheep would always be dirty, and was sure they would look singular; but now after three years trial, I am fully satisfied that all the objections to long tails, are without foundation; and that the tail is not only useful, as it protects the tender parts it was designed to cover, from extreme cold or heat, but also ornamental, the animal not wanting a member, designed by nature for its comfort. I must say that although Mr. Bliss was called eccentric,for supposing a sheep should wear its tail, I think that without one, if it does not look absolutely vulgar, it does very ungenteel. I have now about three hundred long tailed ewes; and shall have all my flock so after my old stock is gone. If the tails are shorn before the sheep are turned to grass, there will be no more dirty ones, than if they had no tails; and the wool of course will pay more than four fold for shearing. Will not many try this humane experiment to satisfy themselves; at any rate, none should condemn it without a fair trial. DANIEL S. CURTIS

Canaan Centre, Feb. 10, 1845.

ASHES—CORN AND POTATOES IN ALTERNATE ROWS.

EDITOR CULTIVATOR—I have the past season made some experiments with ashes and plaster on corn, but they were not conducted with sufficient accuracy, though they enable me to GUESS, to *my own* satisfaction, that the best way is to mix one part plaster to five of leached and unleached ashes, and apply a handful after the corn is above ground. On dry ground it produced the greatest effect.

I have planted corn and potatoes in alternate rows, and have *guessed* that I obtained almost as much corn as if every row was corn, and half as many potatoes. I wish some of your correspondents would try it. I have tried it in hills and drills. They will bear to be nearer together than if every row was corn. Yours, &c.

HENRY HULL.

Claverack, Columbia co., N. Y., 1st mo. 8th, 1845.

PLOWING.

The season for commencing active operations in the field having arrived, it may not be out of place to submit a few remarks on the subject of plowing, as this is perhaps the most important operation in field culture, and one which should be performed with most care and attention. No amount of extra labor in the after culture can compensate for a defect in the plowing of the ground; and he is most certainly an improvident and unwise farmer who will allow his grounds to be imperfectly broken up in the preparation for a crop. We are aware that in submitting our views upon this subject, we shall be met by the remark so often made, that every body knows how to plow, and that no *directions* are needed upon this point. While it is freely admitted that every man can learn to plow well, it is by no means clear that all *do* thus perform this branch of their farm labor. Should we make this admission, we fear that in our rambles the great number of poorly plowed fields which may be found in nearly every neighborhood, would be constantly reproaching us with injustice, while we should get no thanks from the plowmen whose work we had so unjustly recommended. There has evidently been great improvement in this branch of farming in the last five years, more indeed than in ten or even twenty previous ones, but truth requires us to say that not one half of the land in this country is well plowed even in this age of improvement, and when public attention is directed to new methods in cultivating the soil as well as to improvements in the mechanic arts. Were we to look for the cause of improvement in plowing, we should undoubtedly be led in our investigations to the plowing matches which have in the last five years been held under the direction of different agricultural associations as the apparent cause of much of the improvement which is to be seen at the present day. The origin, the first cause of these improvements, may doubtless be traced to discussions and reflections which appeared many years ago in some of the agricultural journals. To no man are we more indebted for the impetus which has been given to this branch of agriculture than to Judge Buel. In this, as in all things pertaining to the interests of the farmer, he urged the necessity of advances towards perfection, and the skill which is now so often shown in the operations of the plowman, shows that the subject has gained much from investigation.

We would not be unmindful of the great aid which agriculture has received at the hands of mechanical genius, and in no branch of farm labor has science contributed in a greater degree to relieve both man and team from fatigue and toil. Had nothing more been done through the instrumentality of our agricultural societies than the improvements in the plow, their high aim would have been in no small degree accomplished, and farmers would be well repaid for all the time and money expended in their support. To the men who have contributed in so great a degree to improve farm implements our warmest thanks are justly due, and it is really gratifying to know that some of these men are receiving a patronage proportionate to their efforts at improvements.

In an article upon this subject, which was published in many of the agricultural papers some three years ago, we remarked, that "any man of ordinary strength and good common sense can learn to plow well," and we are happy to see that a great number who at that time did not perform their work in a proper manner, are now among our best plowmen. We have seen no reason to change the opinion then expressed, although it would hardly do to reverse the proposition, and say that the man who does not thus perform his work is destitute of common sense. It may, however, with truth be said that he is blind to his own interests, and very little hope can be entertained that he will ever contribute his share to the common stock of agricultural knowledge.

We now beg leave to invite all our readers to accompany us to the field where we can witness the practical operations of the plowman, and where, unlike the mere theoretical speculations in the office or by the fire-side, we can learn from actual demonstration the difference between good and bad plowing. Here is a field partly plowed over, but it is not done exactly according to our notion, and we will try our hand at the work. Those furrows are too crooked, the soil is not all properly turned, and then you see one end of the land is finished while the other is a rod wide. The team must turn several times in the middle of the land before the work will be completed. Perhaps we shall not do the work better, but we'll try, and keep trying until we succeed. First let us have the plow in good order, the guage-wheel properly adjusted, the mold-board bright and smooth, then give us the reins and set a stake yonder at the further end of the land and see if we don't make a straight furrow. There! fifty rods long and as straight as a line; no crooked places to spoil the work of the whole land. Now, we will turn another furrow, not on the first, but so the edges will just meet and continue to "back furrow," until our land is about half done, then go round the land, keeping every furrow perfectly straight, and straightening all the crooked places, so that one furrow will finish the whole length without turning. How much better this land looks than the one poorly done, and then how much more prospect of a good crop. Every inch of ground is broke, and every sod is turned, and the whole land presents a neat and workmanlike appearance. But we had forgotton to strike a furrow across each end of the field, about a rod from the fence, so that we may have ample room for the team to turn, while the ends of the furrows are even and uniform. The plow must not be suffered to cross this line until turned out of the ground.

Some of our readers may think it easier to give directions than to do the work. To such we can only say, call on us any day in plowing time, and we will endeavor to satisfy you that we know something of the use of the plow, and that we have spent more time between the plow-handles than in writing for publication.

Much might be said of the propriety of deep or shallow plowing, but as there is not room in this article we will only remark that in our judgment deep plowing on almost all soils is beneficial, especially after that portion of the subsoil turned to the surface has been some time exposed to the action of the frost and to the meliorating influences of the light, heat, &c. We do not consider it certain that the first crop is always benefited by deep plowing, but that the soil is permanently improved by such process there cannot, we think, be the slightest doubt. The subsoil plow is, however, the article best calculated to improve all our heavy and retentive soils, and it is hoped the time is not far distant when it will be in common use among farmers as much perhaps as the common plow. It may not, and probably will not, be found necessary to resort to deep stirring of the soil every year, but as often once in every course of crops, or every three or four years, great benefits would be derived from this operation.

Neither do we propose to discuss now to any extent the merits of a flat or lapped furrow, although much difference of opinion exists among farmers on this subject. It seems clear that on all wet or tenacious lands the furrow slice should be lapped; and we suppose the opinion also is generally held, that on dry and porous soils flat furrows are preferable. Of the correctness of this last proposition our own convictions are not very clear, and we continue on nearly all soils to lap the furrow slightly, thus exposing full one third more surface and leaving it in condition to be acted upon by the harrow with good effect.

That there has been very manifest improvement in the practice of farmers in plowing their grounds we have the best evidence in the fields every where presented to our view, in which the straight and handsomely turned furrows, the smooth and unbroken soil, and other evidences of skill and workmanship all prove that the spirit of inquiry and of improvement is abroad, and that a complete change in this department of agriculture is now taking place.

We have already alluded to the very great improvements in the manufacture of plows, and would again say that without this advantage our present state of cultivation would not have been reached. There are many good plows in use in different sections of the country, but the farmers are slow to adopt them in place of old and imperfect implements. For illustration of this fact the writer would state that in the county where he resides there are probably some twelve or fifteen, or even more, different kinds of plows in use, not more than five or six of which are any where near up to the improvements of the age. Of this latter class the difference in principles of construction is so slight that there may, in fact, be said to be no more than three kinds in use which are really in accordance with the improved principles of construction. Could farmers see and know the advantages of using a *good* plow, in place of the poor ones so generally in use, they would at once discard four-fifths of the old patterns, and endeavor to use none but a good article.

The plowing matches at our State Fairs have been well attended, and much good work done, but there seems to be still room for improvement. I think I speak the sentiments of many plowmen in Oneida when I invite those who desire to see specimens of skill, or who may choose to try their hand with our *boys* at the plow, to attend the plowing match at Utica, in September next.

E. COMSTOCK.

Rome, March, 1845.

TRANSMUTATION OF GRAIN.

MR. EDITOR—We have fallen on portentous tines. Patriotism and *potatoes* are threatened with extermination. What will take their places is hard to tell; and friend BRECK, in the leading article of the N. E. Farmer of November 20th, seems to entertain serious apprehensions of the *probability* of our wheat turning, not into *cheat*, but into "*oates*." This, though it would be a dreadful calamity with us western farmers, would not be quite so bad as utter extermination, especially since the "Rev. Lord Arthur Hervey," at the request of his "Lordship, the Marquis of Bristol," has *headed* Madame Nature, and obtained "*a little wheat*" from a "*handful of oats*." This wonderful, fortunate and timely discovery, it is to be hoped, may possibly prevent the entire extinction of the whole race of the precious grain.

It is difficult to treat this subject of the "transmutation of grain," with anything like gravity; but to be as serious as possible, if Mr. Breck will look at his Bible, he will find the very first chapter demolishes the doctrine, and blows it all to atoms.

But he says, "It is a subject upon which *sensible men* differ in opinion." True, it is. But does he consider that there are a great many kinds of *sensible men*, and a great many kinds of *sense* in the world? Some men are very sensible on some subjects, and mere dolts on others. Virgil, whose "wordes" Master Gerarde quotes to substantiate the doctrine of the "transmutation of one species into another in plants," was a very sensible poet. But if *sensible men* now-a-days were to adopt some of his whims respecting agriculture, the influences of the moon, management of bees, &c.; if they should escape an "indictment for heresy" they would certainly have to encounter the "world's dread laugh" as "dreamers." The plain deduction from Virgil's testimony is, that there were agricultural slovens in Italy then, as there are in other parts of the world now.

Were I a poet, and wished to immortalize the slovenly practices of many of our would-be farmers in imperishable verse, I would say,

> On land where they some choice good wheat do sow,
> Not much but tares and worthless cheat do grow.

And I would account for the fact, in humble prose, without calling to my aid the ridiculous doctrine of the "transmutation of grain."

But Professor Lindley "virtually admits the doctrine *may* be true, by recommending that experiments be tried to settle the question whether, *by any means, wheat, oats, barley and rye can be made to change into each other*." Well, this is sufficiently ludicrous, and let us no longer wonder that *book farming* is laughed at, when such agricultural journals as the "London Gardener's Chronicle," and such men as Professor Lindley, the "learned botanist," seriously recommend that a "good many persons would try the experiment, in different parts of the country."

Now, I am nothing but a plain farmer, who never saw the inside of a college, or of a professor's laboratory, in my life, but if I were a learned professor, and had never been outside of a college or laboratory, and felt disposed to "astonish the natives" by announcing the discovery of some wonderful *vagaries*, and strange freaks of nature, in the "transmutation of grain," I would procure an ear of rye, and another of wheat, for example, and putting on a very wise and knowing look, I would triumphantly exhibit them to obstinate doubters, as exemplifications of the truth and reality of the doctrine of transmutation, and of what the "worthy Master Gerarde" saw with his *owne* eyes, in the *yeare* 1632, excepting that, as the world grows older the variation from nature is a little more remarkable and striking, for in the case of the rye, instead of "three or four *perfect oates* in the middle thereof," I find, what is still more extraordinary and astonishing, three or four perfect *vegetable oyster seeds!* And in the offspring of a perfect kernel of wheat I find, *O mirabile dictu!* a number of miniature *apples of Sodom*, filled with soot and ashes!

I said there are a great many kinds of sensible men in the world. Whether Master Gerarde, Lord Bristol, Rev. Lord Hervey, Professor Lindley, or friend Breck, are illustrations or not, I can refer to some, both dead and living, who are. The Rev. Mr. T., of A., Ct. was a good preacher, an erudite scholar, a *sensible* man, distinguished for urbanity and gentlemanly deportment. He married an excellent and wealthy lady. With her fortune he purchased a farm, built a handsome house on the Hartford and Norwich turnpike. He built also a good barn, *directly over a ravine*, which served as a sewer to let off the filth of his barn-yard, through a culvert across the road, and into Hop river, a few yards below. This was a specimen of one kind of *sensible* men.

When I lived in Connecticut, in addition to farming I carried on the cloth-dressing business. Mixed colors were becoming fashionable. Mr. K., since promoted to the bench, as associate judge, in the county of T———d, in many respects a shrewd *sensible* man, brought a piece of cloth to my shop to be dressed, and wished it to be dyed a *mixed color!*

These, and hundreds of other examples which might be adduced, though they might be thought somewhat irrelevant to my subject, yet substantiate my position that *sensible men* sometimes blunder into the most ridiculous absurdities, as, I think, they always do when they blunder from nature's well defined paths, into the wild, theoretical, ideal road of *transmutation*.

And now let us think ourselves fortunate, since the experiments already made at the request of my Lord Bristol, and those likely to be made at the suggestion of Professor Lindley, the "learned botanist," are so well calculated to dissipate our fears and encourage our hopes, that, although nature may be fickle and inconstant, and change our *wheat* into *oates*, yet by the ingenuity of the shrewd Germans a plan has been hit upon by which her wild freaks may be counteracted, and the *oats changed back into wheat again!!*

J. TOWNSEND.

Zanesville, Ohio, December, 1844.

SCRATCHES IN HORSES.—Custom, the want of sufficient farm buildings, and it might be added, bad stable management, have caused us to accumulate our manure in the stables, cleaning them only when carrying out to the fields in the spring. In order to increase the value of the manure, I directed plaster of Paris to be sprinkled frequently upon it. "Does plaster hurt the horses' heels?" I inquired of the stable boy, on visiting the farm. "No, sir, it makes 'em better." "How so?" "They does'nt stomp now, sir." "What made them stomp before?" "I used to have to grease their heels two or three times every winter, for the heels was always raw; but I found they did'nt stomp so much, so I looked at their heels and found they war'nt raw now, like they used to be, sir." I hope soon to have a covering for the proper preservation of manure, but meanwhile must continue to use plaster.

S.

It is stated that out of 9,000 blind persons in the United States, only 400 are enjoying the benefit of instruction.

HEREFORDS—SHORT HORNS—ELEGANT COTTAGE RESIDENCE.

MR. EDITOR—A day or two after the annual meeting of the State Agricultural Society in Albany, in January, I accepted the polite invitation of the proprietors to go and view the beautiful herd of Hereford cattle belonging to Messrs. CORNING and SOTHAM, at "Hereford Hall," about two miles out of Albany. I have visited this extraordinary herd several times before, and each successive visit has been attended with renewed interest. There are, including old and young, about *seventy* head of cattle; and it is no disparagement to the most prominent and valuable herds in the State, (and I have seen many of the most distinguished of them,) to say that I have seen nothing that can surpass this noble stock of Herefords, in appearance at least. Their rich and beautiful color—in most cases a deep mahogany red—their pure white faces, and remarkably bright and expressive eyes—the mild expression of their countenances—their handsomely curving horns—their elastic and sprightly step and majestic bearing, must at once strike the beholder with pleasing interest and enthusiastic admiration; and the perfect symmetry of their form, embracing almost every point of a faultless animal—the deep, full bosom, the round, compact, barrel body, the broad hip and full loins, the short and sinewy arm, neatly tapering below the knee, the brisket boldly prominent, and dewlap well cut up under the throat, the graceful neck, even with the line of the back, and in some instances finely arching, with upright and delicately turned horns—and, in almost every respect, they furnish a perfect beau ideal of *animal* beauty, such as it must do any man good to look at. There is "Matchless" and "Aston Beauty," and "Gay"—all truly "Gay" and "Matchless" "Beauties" in their line. I ought, of course, to think well of "Gay," for she is the mother of my favorite Hereford bull, "Don Quixotte," which I brought from Albany, with my little herd of improved animals, last fall. She is certainly a noble animal, possessing the purest of the "royal blood" of the "royal family" of Herefords, and cost, in England, as I am informed, some two or three years since, 200 guineas, (or $1,000.) which, added to the expense of her importation, makes her stand *high*, at least in the estimation of her spirited importers, and is a pretty good evidence of her real worth. "Major," the grandsire of "Don Quixotte," (and of which animal Mr. T. C. PETERS, writing from London, said—"There is no better in England; and it is no disparagement to our best breeders to say that he has not his superior in the Union") was purchased in England in 1841, by Messrs. Corning and Sotham, for 400 guineas, (or $2,000,) but died on the passage to this country. They were fortunate, however, in securing one of his progeny—"*Trojan*," a splendid and most perfect animal, which they now have in all his "prime and glory"—and I congratulate myself as equally fortunate in being able to possess myself of one of "Trojan's" "most promising sons." "Sir George" is also a fine bull, and his progeny will run "neck-and-neck" with that of "Trojan" in point of excellence. But I must not forget to notice "Eliza," a half Hereford and half short horn cow, which Messrs. C. and S. are feeding for the butcher; she is already one of the finest specimens of a beef creature that I have ever seen walk on "all-fours"—not excepting Rust's celebrated fat ox. It would make an Englishman's mouth water to look at her.

But I must leave the further description of this noble herd of cattle to hands more competent to do it justice, with the single remark, that the Hon. ERASTUS CORNING, to whose liberality and enterprise (aided by the personal exertions and practical experience of Mr. Sotham, a thorough-bred English herdsman,) this country is so much indebted for the importation of this valuable stock, is deserving the lasting gratitude, not only, but the still more tangible reward of the friends of agricultural improvement throughout the country; and I doubt not they will ere long be awarded.

On my way home from Albany I stopped over a day at Auburn, and, in company with my friend W., I visited our agricultural friend, J. M. SHERWOOD, Esq., at his beautiful cottage residence, in the suburbs of that lovely village; and before proceeding to a notice of his fine stock of Shorthorns, I must speak of his charming cottage, which was finished the last autumn. It is in the rural gothic order—a style which, above all others, I most admire for a rural residence. I may, perhaps, have regarded this with the more interest from the fact that I had commenced building on my farm, just before I left home, my "Rural home cottage," which is very similar in style, though somewhat of an improvement, as I think, upon his, in some of its outlines as well as details, and yet less expensive in the main. There is something in this style of architecture so appropriate in form and so picturesque in expression, when blended with rural scenery, that its effects must always be exceedingly pleasing to the eye of every person of taste. The jutting gables, with their ornamented tracery and pointed finials—the expressive dormer windows, breaking out of the roof, with their gothic-arch finish—the tall cluster chimney-tops, neatly ornamented—the pleasant veranda, and the pretty bay-window—all blend most harmoniously with the varied forms of the various kinds of trees and shrubbery that are indispensable in completing the beauty and comforts of a rural residence. And when these latter appendages shall have more fully developed themselves about the cottage and grounds of Col. Sherwood, his residence will present almost a perfect beau ideal of rural beauty and domestic comfort.

But what shall I say of the Colonel's noble herd of Durhams? They have so often been extolled, and have carried off so many prizes at our State shows, that any thing I can say about them may seem superfluous, and yet I cannot well avoid giving them a passing notice. The noble "Archer" stands at the head of the herd—still unrivalled in beauty of form and majestic bearing by any of his progeny; he carried off the first prize at the State fair at Syracuse, and I have always looked upon him as almost a perfect model of symmetry and beauty; and when I have alternately compared him with Mr. Vail's "Wellington" and "Meteor," and Mr. Prentice's "Fairfax"—so equally are they balanced in all the perfections that constitute a faultless animal, that I could only make up my mind that the one I looked at *last* appeared the *best*. The Colonel has also some most beautiful cows—there is "Stella," and "Daisy," and "Pansey," each vieing with the other in claiming the distinction of "reigning belle" of the herd. There are a large number of other fine animals—some very superior calves and young stock among the rest. Col. S. has likewise some handsome Southdown sheep, and some very fine Merinos, from the flock of Mr. Blakeslee, of Connecticut; they are handsomely formed animals, and their wool is of a very superior quality and fineness. All of the fences, buildings, fixtures &c., about the Colonel's premises show him to be a systemrtic and thorough farmer. Would that we had many more such in the State.

T. H. H.

' Rural Home Farm," Rochester, Feb. 20, 1845.

CULTURE OF WATER MELONS.

MR. TUCKER—Last season I raised a fine lot of water mellons, having (with others about here) failed for many years. Having removed the soil sufficiently to receive about half a bushel of horse stable manure and leached ashes, which were thrown in for the hill and levelled; about the same quantity of road side gravel, lodged at the foot of the hill by water, was also thrown in, and some of the soil thrown back, in which the seeds were planted; then over the hill a small quantity of broken charcoal was scattered. The plants were occasionally watered with wash water, or from the sink. The melons were fine and many of them weighed ten or twelve pounds.

J. A. RHODES.

Bridgewater, March 10, 1845.

"By rubbing an unripe apple upon a grater, and washing the portion which is rasped off, in cold water, starch will also be collected, which starch, had the apple been suffered to remain dead ripe, would have been converted into sugar, forming the sweet juice of the fruit."

FARM FOR SALE—A BARGAIN.

A SPLENDID FARM FOR SALE AT AUCTION, with all the stock, farming utensils, furniture, &c. &c. The beautiful and valuable farm of Violet Bank, (situated in Delaware County, N. Y., seven miles from Delhi and four miles from Andes—one mile from the Presbyterian Church of Cabin Hill, and half a mile from the school,) with all the stock, consisting of horses, cows, sheep, pigs and young cattle, harnesses, a superior iron axle wagon but little worn, together with a full set of farming utensils, household furniture, beds, bedding, bedsteads, chairs, tables, parlor and cooking stoves, and a variety of other articles.

The buildings on this farm are almost all new, and consist of a frame dwelling house, plastered and hard finished, wagon house and horse stable also near, large barn, cow stable and wood-house; This farm is well watered, and measures 130 acres, two-thirds of which is under cultivation, and one-third well timbered, and would prove a desirable location for an industrious and enterprising farmer.

The farm, with the buildings, will be sold at auction, WITHOUT RESERVE, at Mr. Edgarton's Tavern in Delhi, on Wednesday, the 9th day of April next, at 1 o'clock, P. M.

The stock, furniture, &c. &c. will be sold on the premises on Thursday, the 10th of April, (the following day,) where the whole can be examined any day before the sale. For terms, which will be liberal, apply to Mr. D. CASE, Delhi, or to Mr. John IMRIE, Cabin Hill.

April 1, 1845—1t.

LINNÆAN BOTANIC GARDEN AND NURSERY.

LATE PRINCE'S,

Flushing, L. I., near New-York.

THE new proprietors of this ancient and celebrated Nursery, late of WILLIAM PRINCE, deceased, and exclusively designated by the above title for nearly fifty years, offer for sale, at reduced prices, a more extensive variety of FRUIT and ORNAMENTAL TREES, SHRUBS, VINES, PLANTS, &c., than can be found in any other Nursery in the United States, and the genuineness of which may be depended upon; and they will unremittingly endeavor to merit the confidence and patronage of the public, by integrity and liberality in dealing, and moderation in charges.

DESCRIPTIVE CATALOGUES, with directions for planting and culture, furnished gratis on application to the New Proprietors, by mail, post paid, and orders promptly executed.

WINTER & CO.
Flushing, L I., April 1, 1845—1t. Proprietors.

AYRSHIRES.

FOR SALE, an imported Ayrshire bull and two imported Ayrshire cows, also three young Ayrshire bulls—they were selected in Scotland, and their superiors are not in this country. Apply, post-paid, to MARK H. NEWMAN,
April 1, 1845—1t. 199 Broadway, New-York.

PERUVIAN GUANO.

THE subscriber will keep constantly on hand for sale, in large or small quantities, the best quality of genuine Peruvian Guano.

Price in single bags, weighing from 125 to 175 lbs., 2½ cts. per lb.
for half a ton to one ton,.................... 2¼ " "
over one ton to five tons,..................... 2 1-8 " "

A. B. ALLEN,
March 20, 1845—2t. 205, Broadway, New-York.

WANTS A SITUATION.

A MAN with a family wants a situation as farmer or gardener. He was brought up to farming in Galloway, Scotland, and considers himself well acquainted with the different branches of agriculture practiced both in that country and this. He has been several years in this country, and can give satisfactory references in this vicinity. His wife is well acquainted with dairying. Address W. McRoberts, care of D. LATHROP, Washington-street, Albany.

March 20, 1845—1t *

HORSE POWERS AND THRESHING MACHINES.

THE undersigned takes this opportunity to give notice that an important improvement has just been added to the celebrated "Warren's Portable Horse Power Machines," which secures to these valuable inventions a continued superiority in all respects.

The particular attention of Southern and Western merchants, as well as Planters and Farmers, is specially invited. Such testimonials as follows, are in hand received recently in ordinary correspondence, viz:—"The machine has given entire satisfaction, and is considered by all who have seen it, the best they have ever met with for threshing fast and clean, preserving the straw whole, and from the simplicity of its construction, being little liable to get out of order."

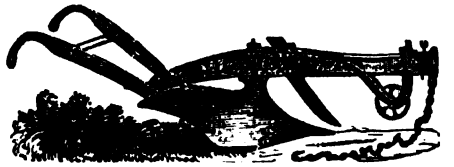
Old prices still continued, viz:—two horsepower and thresher together, only $75—four horse, $110—one horse, $60—threshers alone, $20, $25 and $30—Leather bands, $4 and $5.

Liberal deductions made to those who purchase in quantities, for sale. Terms—cash, produce, or approved paper, on delivery in this city.

H. BARTLETT,
Successors to L. Bostwick & Co.
146 Front-street, New-York.

N. B.—Orders for Platt's celebrated Portable Mill, for hand, horse or other power, can be supplied at the exclusive agency in this city. The undersigned offers his agency also to procure for agriculturists and others, the most approved machines and implements, manures, seeds, &c. at moderate commission. H. BARTLETT.

April 1, 1845—1t.



QUINCY HALL
AGRICULTURAL WARE-HOUSE AND SEED STORE,
BOSTON,

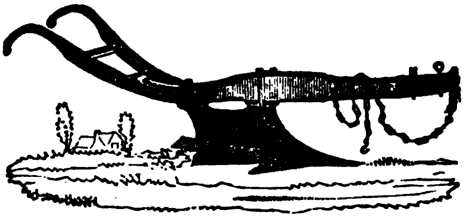
BY RUGGLES, NOURSE & MASON,

MANUFACTURERS of the distinguished WORCESTER PLOWS, among which, are a variety of patterns and sizes, adapted to all kinds and conditions of soil and modes of culture throughout the several States, and including the several sizes of their celebrated EAGLE pattern, and the genuine Scotch SUBSOIL Plows.

They hazard nothing in saying that with large additions to their warehouse and stock, they now offer to the agricultural public and dealers, a much greater assortment of agricultural and horticultural implements, machines, and seeds, than can be found at any house in the Union; all of which are selected from the most approved kinds found in this country and Europe.

All communications and orders from a distance, will receive prompt attention, and goods safely packed.

March 20, 1845—2t*



WORCESTER EAGLE AND SUB-SOIL PLOWS.

THE subscribers have now on hand a full assortment of the above superior Plows, manufactured by RUGGLES, NOURSE & MASON of Worcester, Mass. It is acknowledged by all who have made the experiment, that the "Improved Eagle," is the best Field Plow at present in use.

The advantage of Sub-soil plowing, is now very generally admitted, and the plows made for this purpose by Ruggles, Nourse & Mason, are constructed upon the most approved principles.

Side Hill Plows, Cultivators, Straw and Root Cutters, and a general assortment of farming implements, for sale at the Hardware store of PRUYN, WILSON & VOSBURGH,
Albany, April 1, 1845—2t. 39 State-street.

PREMIUM EAGLE, SUBSOIL, AND OTHER PLOWS.

THE subscriber having been appointed sole Agent in this city, for the sale of the celebrated Premium Plows, made by Ruggles, Nourse & Mason, of Worcester, Massachusetts, now offers them for sale at the manufacturer's home prices. They are calculated alike for the Northern Farmer and Southern Planter, and embrace all varieties. Price from $3.50 to $11,50.

The great number of premiums which these plows have obtained at the most important plowing matches, and the universal satisfaction they have given wherever introduced, renders it unnecessary to particularise their merits. They are made of the best materials, are highly finished, and combine light weight and easy draft, with great strength and durability. Though the first price is higher than the common kinds, they do their work in so superior a manner, and with a draft so much easier for the team, that they are universally preferred where known. It has been repeatedly proved that a single pair of oxen, horses, or good mules attached to the Eagle plow, No. 1, in any reasonably friable soil, will easily turn a furrow of 6 inches deep by 12 inches wide. In addition to the above good qualities, being made of the best materials and highly finished, these plows last much longer than the common kind; they are consequently much the cheapest in the end.

SUPERIOR HAND AND HORSE CULTIVATORS. These are made at the same manufactory. Price from $3 to $6.50.

A NEW IMPROVED DRILLING MACHINE. This is calculated for sowing all kinds of seeds. Price, $10. A. B. ALLEN,
March 20, 1845—2t. 205 Broadway, New-York.

PLOWS.

AT the Syracuse Agricultural Warehouse and Seed Store, can be obtained Delano's celebrated Diamond Plow made by Mr Howard Delano, of Mottville, for the sale of which, we are sole agents for this town. Price, $6 for plain plow, and $10 for the wheel, coulter and clevey. Also, a full assortment of the well known Massachusetts Plow, made by Ruggles, Nourse & Mason of Worcester. 300 bushels seed barley, 300 do. pure Marrowfat Peas, 100 do. Clover seed, 150 do. Timothy, and a general assortment of all the varieties of seed sown by the tillers of the soil; Cultivators, corn plows, Wheel-barrows, Churns, Cheese Tubs, Cheese Cloth, Hoops and Presses, Hoes, Manure, Hay and Barley Forks, Shovels and Spades; and a very great variety of articles appertaining to the interest of the husbandman. Orders promptly executed.

Syracuse, April, 1845. FOSTER & NORTH.

VALUABLE WORKS, BY A. J. DOWNING, Esq.

ON LANDSCAPE GARDENING.—A Treatise on Landscape Gardening: adapted to North America, with a view to the improvement of Country Residences. Comprising historical notices, and general principles of the art; directions for laying out grounds, and arranging plantations; description and cultivation of hardy trees; decorative accompaniments to the house and grounds; formation of pieces of artificial water, flower-gardens, etc.; with remarks on Rural Architecture. New edition, with large additions and improvements, and many new and beautiful illustrations By A. J. Downing. 1 large vol. 8 vo. $3,50.

"This volume, the first American Treatise on this subject, will at once take the rank of THE standard work."—[Silliman's Journal.]

"Downing's Landscape Gardening is a masterly work of its kind—more especially considering that the art is yet in its infancy in America."—[Loudon's Gardener's Magazine.]

COTTAGE RESIDENCES.—Designs for Cottage Residences, adapted to North America, including Elevations and Plans of the Buildings, and Designs for Laying out Grounds. By A. J. Downing, Esq. 1 vol. 8 vo. with very neat illustrations. Second edition, revised. $2,00.

The "Cottage Residences" seems to have been equally well-timed and happily done. Country gentlemen, no longer limited to the meager designs of uneducated carpenters, are erecting agreeable cottages in a variety of styles suited to the location or scenery. Even in the West and South there are already many striking cottages and villas built wholly, or in part, from Mr. Downing's designs: and in the suburbs of some of the cities, most of the new residences are modified or moulded after the hints thrown out in this work.

FRUITS OF AMERICA.—The Fruits and Fruit Trees of America; or, the culture, propagation, and management, in the garden and orchard, of fruit trees generally; with descriptions of all the finest varieties of fruit, native or foreign, cultivated in the gardens of this country. Illustrated with numerous engravings and outlines of fruit. By A. J. Downing. 1 vol. 12 mo., (and also 8 vo.)

⁂ This will be the most complete work on the subject ever published, and will, it is hoped, supply a desideratum long felt by amateurs and cultivators.

GARDENING FOR LADIES.—Gardening for Ladies; and Companion to the Flower Garden. Being an Alphabetical arrangement of all the ornamental Plants usually grown in gardens and shrubberies; with full directions for their culture. By Mrs. Loudon. First American, from the second London edition. Revised and edited by A. J. Downing. 1 thick vol. 12 mo., with engravings representing the processes of grafting, budding, layering, &c. &c. $1,50.

"A truly charming work, written with simplicity and clearness. It is decidedly the best work on the subject, and we strongly recommend it to all our fair countrywomen, as a work they ought not to be without."—[N. Y. Courier.]

ON HORTICULTURE.—The Theory of Horticulture; or an attempt to explain the principal operations of gardening upon physiological principles. By John Lindley, Ph. D., F. R. S., with notes and additions by A. J. Downing, and Dr. A. Gray. 1 thick vol. 12 mo., with engravings, $1,25.

"A vast fund of horticultural learning, and embraces, it is hardly too much to say, nearly all that an intelligent gardener need know."—[Loudon's Magazine of Gardening.]

The above works are published by WILEY & PUTNAM, 161 Broadway, New-York, and may be ordered through any Bookseller in the country. March 20, 1845—1t.

MOUNT HOPE BOTANIC GARDEN & NURSERIES,

ROCHESTER, N. Y.

THE Proprietors respectfully announce, that their present stock of FRUIT AND ORNAMENTAL TREES, SHRUBS and PLANTS is unusually fine.

The collection of fruits comprises the most esteemed American and Foreign varieties; the trees are handsome, thrifty, and of the most suitable age and size for successful transplanting; and being propagated with the most scrupulous care by the proprietors themselves, either from bearing trees in their own grounds, or from others of undoubted correctness, can with confidence be recommended as GENUINE.

A choice collection of Pears, comprising the most esteemed European varieties, selected by one of the proprietors personally in the best nurseries of France, is also offered; they are on quince stocks, intended for growing in the pyramidical form, and will bear the year after transplanting; they may be planted six feet apart, and are consequently admirably adapted for garden culture.

Over 2,000 trees of the valuable native apple the "Northern Spy" are yet on hand; this is generally acknowledged to be one of the best varieties cultivated.

The collection of Roses is very fine, including a very choice assortment of Standard or Tree Roses, 4 to 6 feet high; these are beautiful objects for lawns or borders—most of them are perpetual, or ever-blooming.

A large and splendid stock of Green-house Plants, including the finest new varieties of Roses and Geraniums, &c., are on hand, and are offered at low prices.

Trees, Shrubs, Plants, &c, securely packed for transportation to any part of the country.

Priced Catalogues sent gratis to all post-paid applications.

The public are respectfully invited to visit the establishment—location, nearly opposite the Mount Hope Cemetery.

All orders and communications must be addressed, post-paid, to

ELLWANGER & BARRY.

N. B. Scions of the "Northern Spy" apple, and other choice varieties, will be furnished in small quantities.

Rochester, April 1, 1845—1t.

EXTENSIVE SALE OF IMPROVED SHORT HORNED CATTLE.

HAVING become over-stocked, I find myself under the necessity, for the first time, of publicly offering my cattle for sale; and that the opportunity to purchase fine animals may be made the more inviting, I propose to put in my ENTIRE HERD—such a herd of Improved Short Horns as has never before, perhaps, been offered by any individual in this country. The sale will embrace about fifty animals, Bulls, Cows and Heifers; all, either imported, or the immediate descendants of those which were so, and of perfect pedigree. Those imported, were from several of the best stocks in England, selected either by myself or my friends.

It is sometimes the practice at sales of this kind, where the interest involved is considerable, for the proprietor to protect himself by buy bidders, or some other kind of management, or for the owner to stop the sale if offers do not come up to his expectations or the requirements of his interest. Such practices have a tendency to lessen the interest in public sales of this character, especially with those who cannot attend without considerable personal inconvenience. But in this case, assurances are given that no disappointment shall arise to the company from either of the causes mentioned, and a good degree of confidence is felt that there will be no dissatisfaction from the character of the cattle themselves. They shall all be submitted to the company, and sold at such prices as they choose to give, without any covert machinery, effort, or understanding with any persons; reserving to myself only the privilege of bidding openly on three or four animals, which shall first be designated. This reservation is made that I may not get entirely out of the stock of some particular families which I highly esteem, and that could not probably be replaced.

A full catalogue will be prepared and inserted in the May number of the Cultivator.

The sale will take place at Mount Hope, one mile south of the city of Albany, on Wednesday, the 25th day of June next, at 10 o'clock A. M. E. P. PRENTICE.

Mount Hope, near Albany, March 15, 1845.

☞ Gentlemen from a distance, who wish to obtain stock at the above mentioned sale, and may find it inconvenient to attend in person, are informed that the subscriber will make purchases for those by whom he may be authorized. They can state the sum at which bids should be limited, and if convenient, designate the animals they would prefer; or give such general instructions as they may deem proper, under the assurance that they will be strictly adhered to.

SANFORD HOWARD.

Cultivator Office, Albany, March 15, 1845.

SALE OF FULL BLOODED NORMAN HORSES.

THE subscriber having relinquished farming, will offer at public vendue, at his farm in Moorestown, Burlington county, New-Jersey, nine miles from Philadelphia, on Tuesday, the 20th of May next, his entire stock of NORMAN HORSES, consisting of two Imported Stallions, "Diligence" and "Buonaparte;" two Imported Mares—three full blooded Stud Colts, one, two and four years old—two full blooded Fillies, three and four years old—two Fillies by "Diligence," from a half blood Canadian Mare, three and four years old, and one Filly four years old, by "Diligence," from a well bred English mare, broke and kind to harness.

The undersigned deems it unnecessary to speak at large of the qualities of these horses, so much having been said of this particular importation, (which is believed to be the only one ever made to the United States,) in all the principal agricultural papers. In a few words, they are the Canada Horse, on a larger scale, combining the form, activity and hardihood of that well known race, with greater size and strength. "Diligence" has been a remarkably successful stallion; he has been exhibited at the Fairs of the Pennsylvania and New-York Agricultural Societies, where he was not entitled to compete for the premiums, but received the highest encomiums from the Committees. At the Fair of the American Institute, in New-York city in October last, he received the Silver Medal of the Institute.

It is expected that a large number of the colts of "Diligence" will be on the ground on the day of sale, some of which, no doubt, may be purchased. EDWARD HARRIS.

Moorestown, Burlington Co., N. J., March 15, 1845—2t.

DURHAM BULL AND HEIFERS FOR SALE.

THE subscriber offers for sale at moderate prices, during the present month, his full blood 4 years old Durham bull, Don Pedro; bred from the stock of Francis Rotch, (a fine animal,) and a number of choice heifers, full blood and grade, one and two years old. Also, a good second hand lumber wagon, cheap. First call, first served. Should the bull not be sold, I would exchange him for another of the same breed, having now had him with my cows for three years, and wishing to change. DOLPHUS SKINNER.

Deerfield, (near Utica,) April 1, 1845—1t*

ADVERTISEMENT.

POUDRETTE of the best quality, prepared by the New-York Poudrette Company, may be had on application to the undersigned, No. 23 Chamber-street, New-York. Poudrette prepared by this company, was used in larger quantities in 1844 than during any previous season, and with very general success, as may be seen by reference to the numerous reports in relation to it now in my possession, a few of which may be found in the Cultivator for April. The price is, as last year, $5 for three barrels, and $15 for ten barrels, or thirty cents a bushel in bulk at the Factory. ☞ Orders by mail, enclosing the cash, will be as promptly and carefully attended to, as if made personally, by D. K. MINOR,

April 1, 1845—2t. 23 Chambers-street, New-York.

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☞ ADVERTISEMENTS inserted in the Cultivator, at $1,00 per 100 words for each insertion.

BOMMER'S METHOD AT REDUCED PRICES.

THE cheapness and expedition, by which manure may be manufactured with the Bommer process, and the various substances to which it may be successfully and advantageously applied, render it a valuable acquisition to every farmer that will adopt it. To facilitate its general introduction, it is proposed to sell the method uniformly at five dollars. Any individual shall be promptly furnished with a copy of the method without charge of postage, who shall remit the cash by mail to the general agent. It is intended to employ a competent travelling agent, as soon as practicable, in each county. My general agency includes the States of New-York, New Jersey, Virginia, Delaware, Connecticut, Rhode Island, Massachusetts, New Hampshire, Maine and Vermont.

ONE HUNDRED AGENTS WANTED.

Wanted immediately, 100 active, intelligent and enterprising men to engage as travelling agents in the above mentioned States. Unquestionable testimonials will be required; and responsible securities will be expected, as guarantees, for the faithful discharge of the duties of the appointment. Persons of suitable qualifications, will find this both a useful and lucrative employment. Applications, if by mail, should be post paid and directed to me, at Westville, New Haven Co. Connecticut. **ELI BARNETT**, General Agent.

Westville, March 1, 1845.

AMERICAN Farmers Encyclopedia, price $4—Skinner's Cattle Doctor, price 50 cents, and a variety of other works, for sale a the office of "The Cultivator."

THE ROCHESTER NURSERY—BY S. MOULSON,

CONTAINS a splendid collection of fruit trees, the Northern Spy, St. Lawrence apples, and most of the new varieties worthy of the notice of connoisseurs, together with the most approved kinds of cherries, plums, pears, &c., also hardy shrubs, evergreens, &c., orders respectfully solicited. Trees packed suitable for long distances, when required. Six to twelve months credit given for approved notes on interest. **S. MOULSON.**

Rochester, March 20, 1845—1t.

PROUTY & MEARS'

PATENT Centre Draught Self Sharpening Ploughs, from $6 to $13 each—Subsoil Ploughs at $8, $10, and $12 each—Corn Planters $12 to $15—Straw Cutters in variety—Meat Cutters and Stuffers—together with every implement wanted on the farm or garden. Also a full assortment of Vegetable, Flower and Field Seeds, crop of 1844, warranted of the best quality and true to name; among them are several new and superior kinds, as Seymour's Giant Celery, Union Head Lettuce, &c. &c. Fruit Trees, Bulbous Roots, &c. for sale at the Philadelphia Agricultural Ware House and Seed Store No. 194 1-2 Market Street, Phil'a, by **D. O. PROUTY.**

January 20—2t.

SEED STORE AND AGRICULTURAL WARE-HOUSE.

OUR Spring supply of seeds is now ready, and we shall be happy to receive orders for Field or Garden Seeds, of every description, Black Sea, Italian and Siberian Spring Wheat, Barley, Peas, Clover Seed, Timothy Seed, Seed Corn, Shaker and other Garden seeds, &c. Also, a full assortment of farming tools selected from the best manufacturers in the country. Hoes, Scythes, Forks, &c. cheap by the dozen. **E. COMSTOCK.**

Rome, Oneida county, March 1, 1845.

ROME PLOW FACTORY.

THE Diamond Plow which received the first premium at the State Fair at Poughkeepsie, as well as at every County Fair where it has been shown, is manufactured by the subscribers in the very best style, and for sale at wholesale or retail. Also, some eight or ten patterns of approved plans, as well as Scrapers, Cultivators, Cradles, Mott's Agricultural Furnaces, &c. Orders from abroad promptly filled, and a liberal discount to dealers.

March 1, 1845. **BRAINERD & COMSTOCK**

Rome, Oneida county.

ALBANY SEED STORE.

THE proprietor is now receiving from his seed growers, a full and complete assortment of American Garden Seeds, all of which are selected with care, being grown from the best varieties of vegetables to be found in the country; also European seeds, plants and flower seeds from the best establishments in Europe and America.

Fruit trees of all the choicest kinds furnished to order at the lowest market prices, and warranted true as represented. Agricultural and horticultural implements of American and European manufacture. Also, Root-Slicers, Corn-Shellers, Straw-Cutters, &c. Those who wish to purchase or examine are respectfully invited to call.

W. THORBURN, Seedsman & Florist.
March 1, 1846—3 t. corner of Broadway and Maiden Lane.

FOR SALE.

THE splendid two years old Bull "Marius," belonging to Thomas Oliver Esq., of Riversdale, Sing Sing. Marius was imported in 1843 from the far famed stock of Earl Spencer, of Wiseton, Northamptonshire, and was subsequently exhibited at the State fair, held at Po'keepsie, in 1844, at which place he took the first premium of the yearlings in the short-horned class, as also that of the year olds against all classes then exhibited. Subsequently at the Fair of the American Institute last autumn, he was again awarded the first prize for the yearlings of his class. He is a Roan Bull of the most complete symmetry, and although only two years old on the 5th of last Dec., weighs about 20 cwt.

Pedigree—Marius, a Roan Bull—calved December 5th, 1842, got by Roman, dam by Waverly—gr. dam by Satalite—gr. g. dam by Cato—gr. g. g. dam by St. John—gr. g. g. g. dam by Chilton—gr. g. g. g. g. dam by the White Bull—gr. g. g. g. g. gr. dam by Favorite—gr. g. g. g. g. g. gr. dam by Duke. Signed, George Earl Spencer.

Letters, post paid, may be addressed to the subscriber.

Sing-Sing, N. Y. Jan. 28, 1845.—tf. **JOHN LUMSDEN.**

CONNECTICUT SEED LEAF TOBACCO SEED.

THE true broad and narrow Seed Leaf Tobacco Seed, selected from growth of 1844, for sale at the Seed Store of the Hartford County Agricultural Society, by **E W. BULL**, Seedsman.

Feb. 1—3t.

AGRICULTURAL CHEMISTRY AND GEOLOGY.

CATECHISM of Agricultural Chemistry and Geology, by James F. W. Johnston, M. A. F. R. S. S., L. & E. with an Introduction by John Pitkin Norton of Farmington, Ct., from the 8th English edition with notes and additions by the author, prepared expressly for this edition.

N. B.—The above work, first published a year ago, has already gone through eight large editions, and is now used in 3,000 schools in Ireland, and nearly all the schools in Scotland. The present edition, improved from the eighth, and adapted to this country, is now ready—price 18¾ cents. A liberal discount allowed to the trade. All orders promptly attended to.

ERASTUS H. PEASE,
Albany, March 1, 1845. Publisher, 82 State-street.

Printed at the Steam Press of C. Van Benthuysen & Co.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES.

VOL. II. ALBANY, MAY, 1845. No. 5.

THE CULTIVATOR

Is published on the first of each month, at Albany, N. Y., by

LUTHER TUCKER, EDITOR AND PROPRIETOR.

ONE DOLLAR A YEAR.

SEVEN copies for $5—FIFTEEN copies for $10,00—all payments to be made in advance, and free of postage. ☞ All subscriptions to commence with the volume.

☞ Complete sets of the FIRST SERIES of "THE CULTIVATOR," consisting of ten vols., quarto, are for sale at the office, and may be ordered through the Agents o the paper throughout the country. Price, stitched—vols. 1, 2, 3 and 4, 50 cents each—vols. 5. 6, 7, 8, 9 and 10, $1,00 each—for the whole set, $8,00. Vol. I, new series, stitched, $1—bound, $1,25.

OFFICE IN NEW-YORK CITY, AT

M. H. NEWMAN'S BOOKSTORE, No. 199 BROADWAY,

where single numbers, or complete sets of the back volumes, can always be obtained.

☞ This paper is subject to newspaper postage only, being one cent within the State, or within 100 miles of Albany, and 1½ cent for any greater distance.

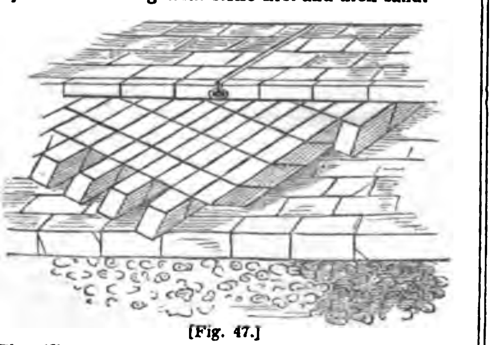
Foreign Correspondence.

MR. HORSFORD'S LETTERS—No. III.

Wood Pavements in London—Journey from London to Giessen—The Vineyards of the Rhine.

Giessen, Germany, Dec. 1844.

MR. TUCKER—In Oxford street, Cheapside, and several other streets of London, the wood paving is so excellent that I inquired the nature of the materials used, and gave a little time to ascertaining the manner in which the blocks are prepared and laid down. Deal is sawed into six inch square scantling, and then the scantling sawed diagonally into blocks. These are then pinned together in parcels about a yard square, and additional strength given by a system of little staples. The larger parcels are then laid down and also firmly bound together. Alternate rows are inclined in opposite directions, and the blocks are set diagonally across the street. The bed upon which the pavement rests, is rendered exceedingly firm by excavation to the depth of three or four feet, and then filling with stone first and then sand.



[Fig. 47.]

Fig. 47 shows the pavement, and the foundation. It presents also the blind gutters, a cast iron trough, a cross section of which is given in fig. 49.

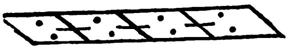
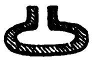


Fig. 48 shows the mode of connection by staples and pins.

[Fig. 48.]



[Fig. 49.]

The paving with wood is extending through the great thoroughfares, and I was told, would probably replace the stone from the Bank to Regent's Park, in a few years. It differs from the pavement in New-York in three particulars which I now remember. The blocks are smaller, of a different shape, and differently disposed. They are inclined, while the blocks of the pavement in Nassau street, and generally all that I had before seen, are vertical. This alternate leaning in one direction and the other, would prevent displacement, while it would permit the rain, not descending to the gutters, an easier passage between them.

The stone pavements are generally better than those of New-York and most American cities, in that the blocks are rectangular, presenting a more uniform and flat surface, than can be made with round stones.

From London bridge, I embarked in Her Majesty's steamer Earl Liverpool, for Ostende, at three o'clock in the morning. A passage of thirteen hours brought me to the Belgian wharf, and I was on the continent. The land is just above the surface of the sea, and it was no easy task to distinguish in the mist of the evening, the outline of the coast from a thousand phases the sky near the horizon sometimes assumes. Ten days in England, had extinguished the capacity of being surprised at any thing novel. Here were the high pointed roofs of which there remain a few humble representations in Broadway, Albany. Soldiery in uniform at every step; the hotels! what a chasm between them and those we had just left. Whole congregations of people going from morning service in church, to pass the day in fishing and their various avocations; females engaged in almost every kind of manual labor, with spades and hoes and baskets, as well as the less severe kinds of service; all these seemed quite as a matter of course, and it is difficult to recall the impressions produced by them at first sight.

The rail-road arrangements for the safety of baggage, were good; a ticket was pasted on the trunk, and a duplicate given to the owner of the baggage; and as with the "check" plan with us, no farther care was required. The cars do not compare with those recently introduced in America, between Boston and Albany, and between New-York and Philadelphia. At every crossing place of a highway, we found a man in uniform and in wooden shoes, behind whom a cross-bar shut up the road. Long rows of low trees seemed to divide the fields and farms from each other. Windmills for grinding corn, and for pumping surplus water beyond the dykes, were constantly in view. I counted sixteen at one time in the range of vision from one side of the car. Here and there, a great pile of bricks in the form of a mansion, from which avenues, through rows of trees, lead in various directions, seemed the residence of a Belgian nobleman. The cultivation with rude plows and spades, appeared to be pretty thorough, though I could tell little about it, from the rapidity of our movement, and particularly from the lateness of the season, (Nov.)

In approaching Brussels, at the conclusion of a four hour's ride, I saw the first considerable hill on the continent. Ghent, which we passed somewhere about half way from Ostende, is upon a knoll, elevated a few feet above the surrounding plain. Brussels rewarded very richly, the day we were able to give it. The beauty of the park, near which

> "There was a sound of revelry by night,
> And Belgium's capital had gathered there,
> Her beauty and her chivaly; and bright
> The lamps shone o'er fair women and brave men."

is exceeded by nothing I had previously seen. Its statues, bowers, walks, and lofty trees, were perfectly in keeping with the rows of beautiful buildings all round. Nearly all of them are white, being covered with a kind of stucco, which gives to them an expression of great neatness. The Cathedral is a stupendous pile, upon which every body remarks as a matter of course. The Town Hall is equally an object of attraction. The manufactories from which the famed Brussels lace is derived, are open to strangers; and the poor girls, whose skill in the production of the exquisitely fine articles, is attained by working in rooms from which nearly all light is excluded, may be sèen at their toil.

From the capital of Belgium for many miles toward Liege, the country is very similar to that between Ostende and Brussels—low, plain, well tilled, irregularly shaped fields of yellowish loam. Liege occupies the inclinations about a grand amphitheatre, and is the commencement of a section of the Vervier railway, upon which are most beautiful specimens of architecture, in bridges, tunnels, extended embankments, &c. I am safe in saying there could not have been less than twenty tunnels, and some of them a full mile in length, in the section between Liege and the Prussian frontier at Aix La Chapelle. The viaducts are of hewn stone, and were massive and tasteful in the highest degree. It served to remind me of the "cut" through Mt. Washington, eastward from Pittsfield, though the Vervier railway has been constructed at a far greater expense.

The crossing of the confines of Prussia at Aix La Chapelle, is characterized by the examination of luggage and *viseing* of passports. Charlemagne's resting place, we had no time to see, and we were denied a visit to the interesting points about this town, as well as Waterloo and Cologne, by the fact that the fall course in Chemistry at Giessen, had already been in progress a fortnight.

At Cologne, a most strongly fortified town, I looked for the first time upon the Rhine; a stream with low banks, and about as wide as the Hudson at Cattskill. From Cologne to Bonn, the banks are skirted through much of the distance with trees, and the scenery is about as interesting as that along a bayou in Texas, or a canal in a prairie. On one side, a tow path, along which, horses to the number of eight or ten, (eleven in one instance,) are walking with a long boat in train. The vessels are laden with all kinds of merchandise, coal, &c., and are on their way from the lower towns on the Rhine to Coblentz, Mayence, and the intervening villages. Besides these, freight boats, (which are supplied with masts and sails,) there are skiffs and barges, long and narrow, which seat from twenty to thirty men, women and children, in addition to provisions and luggage for a long voyage. Of the rafts of timber on the Rhine, every body has heard, and many have doubted the accuracy of representations. Several that I saw were of such gigantic dimensions, that I almost fear to name them. On one, there were about fifty men, whose labors consisted in directing the course of the raft. Dwellings, in which the relief watch ate and slept, were erected at four different places on the raft, and its whole area must have been three hundred by four hundred and fifty feet. The guide books mention them as being manned by from 400 to 500 men, but I saw nothing like so many. The number is probably augmented to this extent when the raft reaches the lower Rhine, and is rowed instead of being floated and merely guided. Pigs and poultry, with the stock of provisions, are kept on board. The timber is from the sources of the Rhine. It consists of straight trunks like masts, and is cut on the tops of mountains about these tributaries, where it is made to slide down, after the manner of the log and board slides on the Alleghany and Genesee. In addition to the tow path, there is on the left bank, a fine McAdam road, commenced by the Romans.

At Bonn, the vineyards first appear. This is a walled town, and the seat of one of the first Universities on the continent. Here Schlegel was a professor; and here now, is Godfreys, the writer upon organic remains, whose compeer in America, has the Palæontology of New-York in charge. There are here other agricultural productions more numerous than the vines, but as the river is ascended, the proportion of land appropriated to the growth of the grape increases. The vines are permitted to grow to the height of about three feet, and are each tied to a rod of the same altitude. The rows are not more than two feet apart, and the individual grape vines in each row, much nearer. All the leaves were quite yellow in the advanced season, and the fruit had been gathered about a month previous. Some of the grapes which I procured, and from which much of the light wine about Bingen is expressed, were very like the Summer Sweet Water in flavor, though less in size. From a few miles above Bonn, all the way to Mayence, about a hundred and twenty miles, the hills and mountains are every where overspread with vineyards. Where the hills are very steep, the declivity is terraced; and I counted in one place thirty-six stone wall terraces, one above another. There are indeed few hill-sides not terraced. In some places, the grape vines are grown in baskets, which are filled with muck and lodged in some niche of a cliff. Zigzag pathways extend from bottom to top, and along these, I saw numbers of the peasantry carrying the earth with which to sustain the vines. This labor I understand must be frequently repeated, or the grapes are unproductive.

Will your readers fancy a wider and deeper river than the Hudson, flowing through continuous *Highlands*, for a hundred miles. Then all these Highlands from the base to the summit, and as far up the lateral ravines as the eye can reach; nothing but rows of grape vines and walled terraces; then these rows of vines having a direction corresponding to the most direct line of descent, in order, I suppose, that the rain may readily flow away; then a distinct limit to every five or six or twenty square rods, marking the possessions of a single individual, and giving the appearance of a beautiful garden without bounds, and they may have some idea of the vintage of the Rhine. I stood with my friend, all absorbed with these features of the scenery, but subdued with the associations that crowded upon me, I looked upon others, as immortalized in Childe Harold, and renowned in history from before the Christian era to the close of Napoleon's career. The passes, the castles, towers, fortresses, the ancient towns so numerous as to scarcely afford time for enumeration as you pass them—cannot be described. Here is a fortress from which a robber compelled vessels ascending the Rhine, to pay tribute. It caps and flanks a mountain, as if Anthony's Nose, near West Point, were tunneled and walled and crowned with stupendous masonry. Here is the place where Constantine saw the cross; here the convents of the times of the Crusades; here the castles and towers of the feudal ages; here the road that Cæsar and his legions trod; and here an abutment of his famous bridge; and here—but I cannot write of them. I have determined upon passing a part at least of my next summer's vacation among the vineyards and wonders of the Rhine, between Cologne and Switzerland, when I shall hope to learn among other things, the secret of the vine culture. Truly yours, E. N. HORSFORD.

MR. MITCHELL'S LETTERS—No. V.

Trip from Liverpool to Jersey—The Markets—English Farmeries—Food of Laborers, &c.

St. Hiliers, Jersey, Feb. 1, 1846.

LUTHER TUCKER, Esq.—In my last, for Liverpool to Gravesend in closing paragraph, read "Liverpool to Plymouth;" and for "vines and pruning hooks of France," read "orchards and dairies of Jersey." The change of arrangement was made after dispatch of letter. The road to Birmingham, was gone over mostly in the dark of the morning; it not being fairly light in that latitude, till after eight. The grass, I could see, was yielding to the unusual severity of the winter, and assuming the yellow tinge of ours in October. Nor were there wanting, along the way, evidences of bad management, such as foul grass lands, straggling hedges, and imperfect tillage;

contrasting very strangely with the richness and order that encompass it. Sheep, feeding upon turneps, checked off by light wooden hurdles, into patches of a few rods square, were frequently seen throughout the country. Perhaps 20 confined to a patch; the fat sheep being turned on first, the store sheep following, and the remaining bottoms grubbed up with the hoe. Your readers must remember, that there is scarce a day in thirty of a British winter, in which the ground is not as soft as in May; and cabbage beds are made up, and brocoli transplanted under the winter solstice. I saw "Prime Ohio Cheese, just arrived," placarded in a shop window in the center of Birmingham! The market was well stocked with meats and with fish in abundance. From Birmingham to Worcester, was gone over in the evening, but next morning, had (for a wonder in England,) a clear sky, and an April air, to look about the market.

Every man who sells meat in England, pays for a license, and he who sells meat, has no authority *ex officio* to sell fish. Hence, in nine cases in ten, the porkman has no veal, and the poulterer no beef, and the vegetable vender none of either. Each has his own stall, numbered and ticketed, and wares displayed before him in most seducing shapes; from a single chop for 3*d.* to the leg for twice as many shillings, from a penny-worth of beef to the red and golden quarter, from a two-penny bunch of celery, to the bunch for half a crown. So I found them on that Saturday morning, (market day) at Worcester. Every avenue about the market house, and the streets in the neighborhood, were lined with country people, (most of them women,) who had come in upon their donkeys, or in horse carts; some with eggs, some with cabbage; all clamorous for the sale of their commodities. That effected, the shop-keepers, or the stall women, who display all sorts of finery under a range of sheds near by, would relieve them of the few pennies resulting from their sales, and by the middle of the afternoon, the donkeys and the horse-carts are pouring in every direction, home. I was much struck with the peculiarly white appearance of the poultry, of which there was a profusion; the heads were left on, and passed under the wing; the feet also remaining, and trussed ready for the spit. The butter was rich to the eye, and the prettily stamped half pound cake, on my breakfast table, rich to the taste. The Herefordshire beef is preferred in the market, and the Yorkshire cows, I was told, were held in most esteem for the dairy.

Worcestershire is famous for its hop culture; 4,000 acres in the county being annually devoted to that crop. The "Hop market" is a large area, enclosed by high brick walls in the center of the city. On the way to Gloucester, the road passed through some of the plantations. Nothing was at that season to be seen but the poles compactly arranged in stacks, about the fields, and thatched over. The farm houses and cottages in the neighborhood of Worcester, are of every conceivable shape, all thatched, and presenting every variety of peak, window, and chimney top.

In the afternoon, I walked through Spetchley Park, in the neighborhood, and took occasion to look about a quiet farmery stowed away in one of its corners. The buildings screened on three of their sides by thickets of evergreens, and arranged in very picturesque, though as it appeared, very serviceable disorder. The more recently erected of them, were of brick or stone, and slated, the others thatched; all in trim order. The farm house would have been a model in America for fancy town cottages; though its shape sat most gracefully upon its own green plat, (which lies before the door of every cottage in England,) and was separated by a light wood paling, from the broad park beyond. I approached the buildings through the rick yard, where were some dozen of large stacks of wheat, barley, beans, &c. set up two feet from the ground upon stone pillars; underneath, the poultry were scratching after the dropping kernels. In the barn, two laborers were threshing wheat upon a slate floor, with flails similar to those in use with us. Before I left, the threshers suspended labor for dinner; and what was it? Half a barley loaf, and a bit of cheese!—this eaten, squat upon the straw, and moistened with a jug of water, and cut in pieces with their pocket clasp knives. This is no joke; it was their *dinner;* and yet a stone's throw away, lay the three hundred acre park for old oaks to fatten on, and herds of deer to dance over, and scores of hares to trip about, and breed, and die upon. Let our farmers and farm laborers, thank Heaven that they are not set down within the range of such odious contrasts. And yet, and it is a shame to every man in America, who has a spot of land and a soul—these same laborers, dining on barley bread, will save enough of time and of means, to put out the sweet brier at their cottage window, to train the ivy up their chimney side, and to keep the grass green and velvety at their door. What for? Do you say what for? "*Out of the ground, made the Lord God to grow every tree that is pleasant to the sight.*" But I must make another letter regarding stall arrangements, drainage, &c., at this farm of Mr. Berkeley's, and half a dozen, I fear, out of a week spent in Devonshire. My next, however, shall be of Jersey.

Yours truly, D. G. MITCHELL.

MR. NORTON'S LETTERS—No. X.

Multiplication and Analyses of New Manures—Guano from a new locality.

Lab. of Ag. Chem. Association, Edinburgh, Feb. 27, 1845.

MR. EDITOR—As the mind of the agricultural community is becoming fully aroused to the necessity of employing every available means for producing and sustaining a high state of fertility in the soil, it is a natural consequence that the varieties of manures should increase with the demand; and that as new light has been thrown upon the subject, attempts should be made to imitate nature by artificial mixtures. More especially has such been the case in this country since the discovery of guano and the application of nitrate of soda and other saline substances. The farmers certainly cannot fail for lack of a variety from which to choose. Advertisements of artificial guanos better than the natural, of patent inorganic manures, of admirable seed steeps, meet him on every side. Judging from these highly colored pictures, no land can much longer remain barren. A few hundred weight per acre will remedy the worst evils.

Fortunately for the farmer, he is not now obliged to trust wholly to the professions of interested parties; for in chemical analysis rightly applied, he has a weapon fatal to imposition. I may as an illustration, give an instance which has lately fallen under my observation in this Laboratory. A manure entitled the "Cornwall Patent Manure," has attracted much attention for some months past, and circulars have been distributed, setting forth its virtues in unmeasured terms. One of them is before me, in which it is said "to have an admirable effect upon wheat, oats, barley, beans, peas, cabbage, potatoes, turneps, carrots, &c; to be an excellent top dressing for grass, and with the rain water, to form a solution destructive to animal life, destroying grubs and worms, to possess all the essential qualities of phosphate of lime, with the advantage of exerting a powerful chemical action in decomposing the rocks and soil, thereby affording potash and soluble silicates."

These are only a part of its alleged virtues, and it must be confessed that they make a goodly show. Unfortunately, however, for the credibility of such statements in this part of the country, a sample of the manure was sent by a gentleman not connected with its manufacture, to this Laboratory for analysis. The result was as follows:

Carbonate of lime,	69.76 per ct.
Hydrate of lime,	9.37
Sulphate of lime,	0.43
Common salt,	0.34
Oxide of iron,	1.67
Alumina,	1.93
Water,	0.65
Insoluble siliceous matter,	15.46
	99.61

What a falling off is here. We have every reason to suppose that this was a fair average specimen; if so, this boasted manure is seen to be no better than some of the best marls. A great portion of it is probably shell sand, and it will be especially noticed after the above puff, that there are absolutely no *phosphates.* The whole bears evidence of having been subjected to heat, and in the insoluble part, there were some small white lumps of fused substances which seemed to indicate that a little silicate of lime or soda, had been added. An analysis of this manure has been made for the company by some chemists at Liverpool, and their report is quite favorable. They especially mention the favorable effects to be expected from the soluble silicates; now it happens that there are no *soluble silicates*. They probably obtained silica by fusing the insoluble portion, but that silica existing as silicate of lime in the manure, was not in a state to be immediately taken up by plants. Without in the least degree impugning the skill of these gentlemen as chemists, it may be doubted whether they have any knowledge of agricultural chemistry. The science often suffers in this way from the assertions of those who have not sufficiently studied its laws. There can be no doubt that artificial manures *may* be made equal to the natural; and when the farmer learns to guard himself by the light of well directed science, the dealer will be forced into honesty.

I have spoken above of the silicate of lime. This is a combination of silica (or quartz,) with lime. It is in some rocks present in large quantity, and slowly decomposing, furnishes a constant, though not abundant supply of both silica and lime. Prof. Johnston in his Lectures, p. 608, speaks of the first slag which is obtained at the iron smelting furnaces; it consists almost entirely of silicate of lime. He recommends that this be broken up and spread over the soil where lime is scarce. In a peaty or boggy soil, where vegetable acids abound, it would decompose more speedily.

As I am upon the subject of manures, I may give the analysis of a guano from a new locality, Saldanha Bay, within the British possessions at the Cape of Good Hope. It contains

Water,	3.92	per ct.
Organic matter and ammoniacal salts,	24.70	
Common salt and sulphate and phosphate of soda and potash,	8.77	
Phosphates of lime and magnesia,	61 15	
Insoluble siliceous matters,	1.27	
	99.81	

This guano is light in color and dry, like the Peruvian, but differs greatly both from that and the Ichaboe, in its composition. The quantity of ammonia is small, but there is a very large proportion of phosphates. Its action would not be so immediately perceptible as that of the other kinds, but might be expected to continue longer. It is said to cover 7 or 8 acres of ground, to the depth of several yards. The papers state that vessels of all nations are permitted to load there after obtaining a license at the Cape. Yours, &c. JOHN P. NORTON.

Domestic Correspondence.

ITEMS OF AGRICULTURAL SURGERY.

1. DYSPEPSIA IN A ROOSTER.—Some years past I observed my children playing with a large rooster, that with other poultry had been removed from the country to the city, and became a pampered animal, like many other bipeds who take little exercise, feed high, and live without work. Upon approaching the group of children who had possession of the bird, it was discovered that he could not stand although his crop was full. On attempting to place him on his feet, he repeatedly fell forward with the weight of his crop, which was distended and hard from the amount of its contents. Presuming that his stomach wanted relief from indigestion, and not knowing how an emetic would work, I took a sharp knife, cut a hole in the crop and emptied it of its contents. It was then washed out with clean water, and the incision sewed up. The fowl being placed upon its feet, immediately flapped its wings and walked away. The materials removed from the crop measured a quart or more, consisting of whole grains of Indian corn, oats and water melon seeds, which, from the commencement of putrefactive fermentation, smelled very offensive. This state of the crop caused me to wash it out clean before sowing it up.

2. A COW SAVED.—On the 2d of March 1842, I was called up early in the morning by one of my men, who stated that we were about to lose a cow. On repairing to the barn, and the enclosure where the animal was confined, a three years old heifer, appeared to be in the agonies of death, from her efforts to expel her first calf, which presented breech foremost. She lay on her side with her feet extended as if exhausted with the exertions of the preceding night. She raised her head, and gave such a look as I never before saw in a dumb beast. It was expressive, penetrating and imploring, and I interpreted it into the words, "*do help me.*" What's to be done? said my man. Why help her to be sure. The cow had evidently been struggling all night, and nothing but the tail of the calf had yet appeared. How will you proceed, said the assistant. Thus, was the reply. Do you take hold of the tail, and I will endeavor to get one or both hands between the thigh and body of the calf, and when the cow makes an effort, we must draw gently downwards. The animal was so much exhausted that her pains were feeble, and at long intervals, but by patience and perseverance, we succeeded after two hours attention, in relieving the cow, but the calf was strangled by remaining so long in the birth. The poor creature was now prostrate and overcome, and there were no after-pains to expel the secundines. After waiting a reasonable time to give her rest, and seeing no prospect of their expulsion, I introduced the hand and extracted them.

In the course of the day we found that the animal could not stand or use her legs, and lest they should become stiff as she lay, we trussed her up by means of an old sacking-bottom under her body as oxen are trussed up when being shod. Her feet were left touching the ground but she did not use them until the fifth of March, three days after her delivery. The unusual presentation in this case, weakened the loins of the cow, and altered her walk, from which she gradually recovered. I still possess the creature, and she has since had a living calf.

I have been informed of a similar case which occurred on another farm, in which the owner fixed an iron hook between the body and thigh of the calf, then tied a rope to the end of it, and three men by main force pulling upon it, delivered the animal, but killed both cow and calf. This occurrence, which was known to my assistant, caused him to think at first that my cow was also to be sacrificed.

3. PROLAPSUS ANI, OR COMING DOWN OF THE INTESTINE IN HOGS.—In the month of January 1844, my assistant in the case of the cow, informed me that we should lose two of our best store hogs, out of a litter of eight, being three quarter Berkshire shoats, between four and five months old. The intestine in both cases had descended and bulged out of the body as large as a man's fist. They were immediately removed to a small out building where they could be shut up and kept warm by themselves. The first operation was to hold up their hind feet, and wash with warm water the protruded intestine, and then to grease it with warm tallow. A man continuing to hold the animal by its hind feet with the head down, my two thumbs were gently pressed upon the gut until it began to yield, and in two or three minutes it was returned into the body. The creature struggled and strained so hard that it came down again several times, and was as often returned in the same manner, sometimes requiring an additional thumb or finger of a third person to overcome the resistance caused by the straining of the hog. External pressure was then made with a roll of rags, confined to the part by a bandage around its body and between its legs. It was then shut up in the dark and supplied with clean dry straw to lie upon. This process was applied to both.

On looking in upon the patients two hours after, they informed me, that the pledget and bandages were uncomfortable, and that they had taken the liberty of rubbing against the building, and had got them off. I could not scold at the unruly animals whose sensibilities are about as acute as the thickness of their skins. So as the intestines had come down again, I called my assistants, and tieing together the hind feet of the young porkers, we secured them to the side of the building in an elevated position, so that they could touch the ground with the fore feet, and after returning the guts once more, left them in that position. My two men had now become so accustomed to the operation, that they acted without my aid. We left the shoats standing heads down, an hour or more until they were perfectly tame from fatigue in standing in such an unusual position. And when they were released, they nestled in the straw and went to sleep. Nothing was given to them the first day but a little drink, and next day some Indian meal gruel. They recovered, and at the end of the year made heavy pork.

4. Cow losing her horn.—On New-Year's day, 1845, one of my cows in fighting another with a fence between them, caught the horn in the rail and completely separated it from the pith. I was absent at the time, but my man who acted as assistant surgeon in the cases of the cow and the shoats, and who thought he had learned something from *a book farmer*, undertook to practice on his own account. He concluded by reasoning on the nature of things, that as the horn was made to cover the pith, the pith ought to be covered, especially in winter. He accordingly shut up the cow by herself, and looking around, found the horn beside the fence lying on the ground, and as cold as a stone. It was replaced, and he went to my farm medicine-chest, and taking therefrom a roll of sticking plaster, spread long strips of muslin with it, and wound the strips around the base of the horn. The result was, that next day the horn became warm at the base, and gradually extended upwards until the whole assumed its natural temperature. The plaster adhered more than a week, and upon examination at that time, the horn was found to be united. It is now three months since the accident, the horn is firmly fixed in its natural position, and the cow is well, and running at large with the others.

If these facts and observations will be useful to any one of the agricultural community, please to accept them from your friend, Richmond.

Staten Island, March 28, 1845.

NOTES OF A TRAVELER—No. I.

Botanical Notices—The best country for Sheep.

Mr. Editor—In March 1842, I left the southern part of Alabama with a horse and buggy for the purpose of making a botanical tour among the mountains of Tennessee and North Carolina. Already many flowers were in bloom; the woods and trees were green, and all nature looked gay and smiling. Among the flowers, the yellow Jasmine, (*Gelsemium sempervirens,*) *Bignonia capriolata*, the dwarf horse chestnut or small buckeye, (*Æsculus pavia,*) Carolina allspice, (*Calycanthus floridus,*) many species of Phlox, *Silene Pennsylvaniæ*, and numerous others, were of frequent occurrence. On the top of the mountain south of Huntsville, two or three miles from the Tennessee river, were numerous small trees in flower, and among them the *Rhus cotinoides* of Nuttall. This beautiful tree is scarcely distinct from the *Rhus cotinus* of Europe, so frequent in cultivation at the north. Its leaves are larger, and it often attains a greater size than the cultivated species, some trees being from 30 to 40 feet high. It was originally found by Mr. Nuttall on the high rocky banks of the Grand river in Arkansas, and these two localities are all that are known to botanists. It is well worthy of cultivation, and owing to its elevated situation it would be apt to succeed well in our climate. In the vicinity of Huntsville, I first saw fields of red clover; neither this or timothy flourish well much south of that latitude; they being unable to withstand the long dry summers of the low southern country. Here I met with an old northern friend, the Dandelion, (*Leontodon taraxacum,*) which gave rise to sweet recollections of home, and the scenes of childhood. The common locust, (*Robinia pseudacacia,*) is indigenous to the mountains near Huntsville, and is also frequently met among the Cumberland mountains and the mountains of North Carolina. On passing into the State of Tennessee, hay was offered for the first time to my horse; he being a native of South Alabama, had never seen the article before, and showed his displeasure by throwing back his ears and shaking his head, but finally ventured to eat sparingly of it, though ever after he preferred corn fodder. Tennessee is so remote from market, and provisions are so abundant, that the price of produce is perhaps lower here than in any other State in the Union, consequently traveling expenses through this State are cheap indeed; there are few sections of the United States through which the traveler who has his own conveyance, can go with so little expense. Many of the inhabitants of middle and eastern Tennessee raise horses, mules and hogs, for the southern market, which are generally driven into the cotton growing States during the month of December, and sold to the planters. I passed through middle Tennessee to Sparta, near the base of the Cumberland mountains, on the stage road leading from Nashville to Knoxville. Here I ascended the mountains and drove along a table land until I descended the mountain again at Kingston, it being more than 30 miles across. This table land abounds in streams of pure water, and is clothed with grass and weeds, among scattering trees and shrubs resembling the oak openings at the west. These mountains, as well as those of North Carolina and Georgia, are well calculated for the summer pasturage of sheep, and as such, are well worthy the attention of wool growers. On the elevated table lands of the mountains of these States, sheep would have a healthy range, abounding in pasture, and never failing springs of pure water. They could be wintered in the low country near the mountains, at comparatively little expense owing to the mildness of the climate, and be summered on the mountains at a cost not much exceeding the wages paid a shepherd, since the price of mountain land is trifling, and it can often be had for the mere expense of surveying. There the pure mountain air and water, and change of scene, would cause the animals to be strong and healthy. Sheep delight in hilly and mountainous districts, where they are not oppressed by the scorching rays which the sun pours upon the plains. If we look at the history of sheep, we will find that they have always flourished best in hilly and mountainous districts; therefore it is not probable that the wool growing business will be profitable on the western prairies, because there is too much sameness in the scenery, and often the want of pure water and air, besides during the summer season, the prairies are often parched by drouth, when the grass becomes dry, affording little nutriment, and then it stands ready to be, and is sometimes consumed by fire. At such seasons, every one knows that sheep would not have a sufficiency of shade, food and water. I allude more particularly to the middle and southern portions of Illinois, and I speak from impressions made in a tour through that region in the dry summer of 1838. I cannot help thinking that the middle and eastern portion of Tennessee, the western part of North Carolina, and northern part of Georgia, has greater natural advantages for the raising of sheep than any other portion of the United States. I spent the summer season exploring the mountains of those States, and may give you some further account of them in future letters.

Yours truly, S. B. Buckley.

West Dresden, Yates co., N. Y., March 22, 1845.

SCOURS IN SHEEP.

This malady is one of the worst complaints that attack the flock; as soon as discovered, the diseased animals should be removed from the flock and kept fasting at least twenty-four hours without any food. Then commence by feeding them in small quantities, ripe hay; coarse timothy is as good as any; keep them up on ripe hay until you are satisfied the disease has abated. This is the most simple and surest method I ever tried.

Fresh feed, grass or hay, may cause this complaint, and when thoroughly commenced among the flock, it may spread by contagion; therefore a shift of place and feed is obviously necessary.

If the hay be brined once or twice each week through the foddering season, say, dissolve one pint of salt in three gallons of water, for a flock of fifty, it will prevent the scours, and is one of the best methods of winter management, if fed in mild weather, that can be recommended for sheep. S. W. Jewett.

Weybridge, Vt., 1845.

NOTES OF TRAVEL IN THE WEST—No. III.

BY SOLON ROBINSON.

At the close of my last communication, I think we had just begun to get among the mineral hills of Missouri. And what can we find in this rugged, uncultivated, and almost uncultivatable district, to interest the readers of an agricultural paper, when the only staple is that same heavy commodity with which guns and brains are sometimes alike loaded? I have to hope that my present leaden article, may not be thought to emanate from a brain overfilled with that substance, or that I shall infuse such a quantity of the arsenical vapor that arises from the smelting furnaces, into this letter, that I shall kill off my friends who have traveled with me thus far. But we must proceed. These rocky hills and mountain sides have to be climbed, before we can reach that rich and sunny southern clime where we hope to find more matter of a practical kind to interest the agricultural reader. I wish I had been favored with that branch of education that ought to be taught in all schools, and I would give you here an interesting view of an "old Spanish house" that I passed this day, January 24th. There are many of these old houses yet to be seen in this country, but they are fast disappearing. This one was only different from many others, that it must have belonged to one of the aristocracy of olden times. It was perhaps an hundred and fifty feet long, one story high, elevated upon high stone pillars, a wide portico the whole length, under which were the several entrances to the different apartments; that into the center hall, being fitted with very wide, massive paneled doors, the windows small, roof steep and ornamented by three high peaked projections or turrets, in the face of which were small windows or loop-holes, that look as though designed to reconnoitre for savage foes that might be lurking in the romantic valley of this location. The vallies of this region are all fertile, and ever will continue to be, while the limestone hills continue to disintegrate and send down the best of manure. Col. Snowden, a gentleman whom I met with to-day upon one of these rich bottom farms, tells me that he raises as fine hemp as he ever raised in Kentucky. I also was informed by Dr. Cooley, (with whom I dined,) another gentleman in the same valley, who lives upon an "old grant," that the long and continued cropping of this land had no perceptible effect upon it. In buying an "old grant," a man has a great advantage over one who enters land surveyed by the United States, because the old settlers having no rigid rules to confine them to straight lines, have run them in all kinds of curious angles so as to make up the amount of their claim entirely of the best lands contiguous.

At Hillsboro, the County seat of Jefferson county, I very unexpectedly met with a warm friend of agricultural improvement, who not only reads himself, but induces others to subscribe for such papers; and yet this man is not a cultivator himself, but as is often the case, is a much more efficient friend of every thing that tends to improve the condition of that class than they themselves are. The reason is soon told. *He reads*—and what is all important, he knows just enough to know that he yet can learn more. The most difficult class to contend with, being those that already know so much that they cannot be taught any more. This gentleman, John S. Matthews, Esq. clerk of the county, has a very fine cabinet of minerals, nearly all of which he has collected himself. It was here that I saw some beautiful specimens of shell marble, quantities of which exist in the neighboring hills, and which might be profitably worked. He also showed me some specimens of cannel coal of excellent quality, from the Osage river, where it has lately been discovered, and will prove of great value to the prairie region of the west, it being much lighter for transportation, and answering in the place of charcoal for mechanical purposes.

Mr. Matthews informs me that the oak ridges of this country, which are at present but little cultivated, are very fertile, and the north sides invariably the most so; and that they produce as great a burthen of blue grass as any land that he is acquainted with. Here then is another "good country for sheep." Yet none are here, for no one has money to buy sheep in a country where silver turns to lead; and often stays turned. For although fortunes are sometimes made by mining, yet taken as a class, the miners are not as well off in the world, as those who follow the slow and sure road to comfortable independence in the cultivation of the earth. Jan. 25th, I visited one of the largest mining establishments in this part of the State, and at present yielding probably the most lead for the amount of labor employed, of any one in the United States. It is known as the "Mammoth Diggings," and is situated in Jefferson county, 55 miles south-west of St Louis. The method of hunting for mineral is this: a man goes upon any land where the external appearances indicate mineral; in fact it is often found in small quantities upon the surface, and commences "prospecting," that is, digging holes 3 or 4 feet in diameter, and more or less deep as the prospect induces, and if he discovers lead, then he goes on "proving" until he finds whether it is worth following, or till the lead give out. The whole country is full of these prospect holes, some of which prove barren, and in others, the miner discovers mineral enough to pay him for his labor, but the "prospect is too poor" to induce him to penetrate into the solid rock below the earth and loose stones near the surface, and he abandons that spot and goes to another, in the hope of eventually making a "discovery," which will lead to quick and certain fortune.

But in this, as I will soon illustrate, as in agriculture, it often happens that a steady and untiring perseverance in the "old diggings," continually turning up the earth a little deeper, would lead to more certain fortune than an abandonment of the old and familiar ground, for a new beginning upon an untried soil, when like the desperate gambler, we place all upon the cast of a single die. At this "Mammoth Digging," some poor fellow about 15 years ago, was within a foot of his fortune: but he was a surface skimmer, and knew not the value of subsoiling: and so he missed the crop that since has been made. But to explain. Some 18 months since, a boy in the neighborhood, who was out "prospecting" among the rugged hills, begun digging out one of these old holes, and in a little time discovered the "blow out" of the mine beneath. This lead being followed up, and the earth and rocks removed a few feet further, opened into a cave lined all around the sides and arch with immense masses of ore, to the amount of one hundred thousand pounds, and so pure that it yielded 75 to 80 per cent of pure lead. And here again is a lesson to encourage perseverance; for after this cave was exhausted, the work was suspended for some time, till at length a small lead was discovered, that lead into a second cave of equal size and richness, and from that to a third one still better, and when I visited the diggins, a single blast of powder had thrown open a passage into a fourth cave which by some, was supposed to contain 200,000 pounds, but I think that amount may be divided by two, which still leaves an immense mass to be exposed to one view. The opening of the cave is in the side of a hill, and the descent so gradual, that the ore is brought to the surface in wheel barrows, where it is cleared of the adhering rock, called by the miners "tiff," a white metallic substance which I am unable to name correctly. It is probably a corruption of tufa. It is then hauled to the furnace, where the operation of smelting has been so simplified within a few years, that I believe I can "tote" fuel enough to melt a thousand pounds of lead. The fuel is dry cedar chips and charcoal, which is mixed with the broken mineral in a furnace holding a bushel or two, and the fire kept in blast by a blow-pipe, driven by a steam engine. In other locations, water power is used. The extent this digging has penetrated into the hill, is about 200 feet, and there is no telling how long they will continue to discover other caves. At other diggings, caves have been found in larger numbers, but lesser size, and much further from the surface.

Some diggings are dry, others so wet as to require a steam engine to pump out the water. Large quantities of mineral have been found in different places in "clay diggins" near the surface. This mineral clay is almost red, very unctuous and very productive. The ore in the clay is in detached cubular masses. In the caves, in globular form—in the rocks, in sheets, varying from the thickness of this paper, to two feet, and these veins are sometimes followed down into the rocks by blasting an hundred feet deep, always with the exciting hope of finding a mass. Many of these mines have been worked for a long time. Those at a place called "old mines," for forty years, by the French residents who still occupy the place, and from the appearance, in the same log cabins they did at first. But those at "Riviere La Motte" in Madison county, are the oldest, there being still an unsettled claim upon the tract, by the heirs of Rino, a Frenchman, who was here in the employ of the king of France in 1723, but as is now supposed, looking for silver instead of lead. There is a large amount of business done at these mines by a poor looking population who work without the hope that animates the class in other places, as here they are all tenants, and have to give the proprietors of the tract of land, which is I believe 3 miles by 6, one-tenth of all their earnings. There is now here ten smelting furnaces for lead, and one or two for copper are building. Cobalt, nickel, and manganese ores are also found here. The south-western part of Missouri is rich in mineral wealth, but shows few examples of agricultural wealth; and the mining population are of that class that every thing that comes light goes lighter, and they live to day, and live poor too, with no thought of the morrow. Now although money may be sometimes easier made by mining than farming, it is an uncertain business, and does not seem to produce so good a state of society as that old fashioned mode of making a good living at least, in the cultivation of the earth. But the business withdraws an immense amount of labor from cultivation, and profitably employs a large amount of capital, and furnishes a market for all the surplus produce of the few farms in the mining region. I must not forget to mention one of this class who I found in the vicinity of the Mammoth Diggings, Willard Frissell, Esq. whose rich and well cultivated farm has enabled him to live free from the temptation of mining some of the rich mineral hills which skirt the fine bottom land that he has in cultivation. Having long been a reader of the Cultivator, I found myself warmly welcomed as an old acquaintance, and rested with him over a lovely sunny day, the last Sabbath in this month. But I have to charge this man, and I doubt not the charge will fit many other readers, with a failure to profit by what he has read. His only water is "toted" up a long steep hill to the house from a spring at the foot, when right by the side of that spring runs a stream of water, that if applied as directed by Mr. Bement, would bring a constant supply from the spring to the house and as "time is money," would save enough every year to pay the expense. Reader—I mean you, don't apply it to your neighbor—have you profited by what you have read, any better? If not, now is the right time to do so. If you have no spring to make run up hill; I'll bet a bucket of cool water you have a well as hard as lime can make it, and no cistern to make your wife look so good natured "wash day."

Jan. 27th. A warm spring-like rain detained me nearly all the forenoon. This is the first "sprinkle" since I left home, which proved rather a hard one in the course of the day; for lured by false appearances, I undertook to drive a dozen miles over a road that the very thoughts of is enough to make the bones ache, of one who is accustomed only to the smooth prairie roads. But patience and perseverance accomplished the task and before the next morning, the rain turned to snow, and for the first time this winter, coated all nature in a white mantle about two inches deep, that soon melted in the morning sun, making as fine a compound of snow and mud and water as ever was mixed together. At Old mines, I saw as fine a young apple orchard as ever grew, proving what might have been proved long before, that the country is well adapted to raising fruit as well as lead. The owner also showed me the benefits of manure as well as lime, upon this limestone soil. By the use of lime, the finest crops of grass can be raised, and many of the hill sides could be set with fruit trees, that are unfit for cultivation.

Potosi is the county seat of Washington county, built of course like all other towns, upon seven hills; for here there is not level ground enough to build scarcely one house, much more a town upon. At this place I was shown a well dug through a bed of lead ore, and was assured that this mineral never injures the water, all of which must come more or less in contact with it. Near Potosi, I visited the farm of John Evans, a good English farmer, who has proved that fruit trees, grass and sheep, will flourish in this part of Missouri, if they can have a chance. At a Frenchman's where I staid over night, I learned a new way to build a barn in a country where saw mills are few and very far between, as is the case here. I will describe it for the benefit of new settlers in general, and some folks in particular.

A row of cedar posts, being first grooved on each side, are set in the ground about five feet apart, and in these grooves are fitted puncheons of any convenient width, the edges resting upon each other, which forms the sides of the barn. Upon the top of these posts, the plates and roof are put. The partitions are all made in the same way, so that there is no sawed stuff and no nails except in roof and doors, and it makes a very good cheap building. The grooves are cut in the posts by a tool made on purpose, shaped like an adze. The plan is worthy the attention of new settlers in many situations that I know of. It will answer very well for making "cheap sheds" for some of the prairie flocks and herds. And now, my dear friends, while I take another rest, let me beg you to have patience. we travel slow, but we have much to see, and life I hope will be long enough to see it all. So once more, I am affectionately your old friend,

Solon Robinson.

DITCHING—COTTON CULTURE.

Editor of the Cultivator—It affords me great pleasure to inform you that I have succeeded in reclaiming my swamp lands by draining, which has rendered them not only safe for fine crops, but their value I now rate very high. I am now engaged in repairing and deepening the ditches I cut last winter, and locating a few smaller ones required. The work has been executed by my own laborers under my directions, and the ditches will compare with any dug by Irishmen. The time employed, I conceive the most advantageously spent of any work bestowed on my plantation. True, the last summer was very dry, but notwithstanding we had a very heavy rain in April, and one in August, which would have left a sufficiency of surface water to have injured the growing crop, had not the waters been conducted off by my ditches. Our winter rains prove their efficacy, as the fields are rid of waters which heretofore stood on the lands. I have accurate and well finished plates of all my swamp fields, with their ditches and ponds thereon, which I would forward on to you, was it not for the expense of the mail, which would give you an idea of the utility and correctness of the work. My stiff swamp lands, that I was apprehensive would not be materially benefited by draining, owing to their tenacity of absorbing water, have by far exceeded my expectations. My ditches, with the aid of a few water furrows, have rendered such lands, as I heretofore despaired of, in my opinion, after a few good plowings, the most productive, and the best quality of cotton is being made on them. Your treatise on draining in your August number for 1844, I examined with great delight, in comparing its instructions with the work executed; and the plan fig. 68, page 241, same number, is an instructive lesson of what I am to undertake, in reclaiming a piece of low land surrounded by high, for the season of 1846. I made one attempt in cutting off a spring on a hill side, which partially answered the desired purpose. My mistake was in placing the ditch a little too high. Experience in this case, shows that where the wet land commences, occasioned by such springs, the ditch should be located a few feet below where the spring emerges, so as to absorb the first springs, and by the depth of the ditch, it cuts off the lower springs. Had I proceeded in the work accordingly, entire satisfaction would have been the result. In examining the ditches of most planters, and such heretofore has been my own mistake, the ditches are all too small, for after a few heavy rains, they become so filled up, as to render very little benefit; but where a ditch is sufficiently large, it not only keeps itself clear, but drains more rapidly and effectually, and requires less attention in keeping them in order.

So much towards ditching—now for cotton. It is an article at present nearly worthless; but as regards its culture, we may say something. Two of my friends and neighbors experimented on Dr. Cloud's method—good lands, well prepared, and well managed throughout; and I am sorry to say I was greatly disappointed in the result. These gentlemen who tried that system, are good planters, energetic, and indefatigable; and they left no stone unturned, in giving it a fair trial. They intend the coming crop, to try it again. One perhaps reached 2000 lbs. to the acre; the other hardly reached that amount. I planted against the former, on the old drill system, and I beat him. His trial was on ten acres, according to Dr. Cloud's method; I placed eighty acres against it, on the old system, acre for acre, or an average against the ten. By this statement, nothing is intended against Dr. Cloud's system, for I am of the impression, it must increase the product of land, and I candidly believe the season of last summer in this section was unfavorable to manured cottons, owing to the drouth it experienced. I manured some fifteen acres of my own in the drill culture, which was by far the most inferior cotton I had, and no doubt the drouth in a measure caused the disappointment in the above crops. One great difficulty they had to contend against, was in procuring a stand, which in the end could not be obtained with no less than four separate plantings, which was against their crop.

Owing to the very low price of cotton, there is some talk among the planters of trying tobacco, as our neighbors, the Floridians, have made the last season a small test of its product, and are so well pleased with the results, that the present year they are going into it on a large scale. Something must be done, for at present rates, the cotton planter is not remunerated for his labor and plantation expenses. The evil I presume will work its own cure.

Jno. H. Dent.

Eufaula, Ala., Feb. 1, 1845.

FEEDING CALVES.

Mr. Editor—I have noticed several articles in the Cultivator upon rearing calves. I will just give you my plan, with results.

Feed and growth of a Calf.—Calved Jan. 19th, 1843—weaned at six weeks old, and weighed 220 pounds. One quart of Indian meal, and one quart of middlings were boiled together and mixed with eight quarts skimmed milk, with which he was fed morning and evening, with as much hay and carrots as he would eat for three weeks and five days, when he weighed 276 pounds—gain 2 1-13 pounds per day. He was then fed with 2¼ quarts Indian meal boiled, without the middlings, for 18 days; weighed 326 pounds; gain per day, 2 7-9 pounds. Meal increased to 3 quarts; fed 22 days; weight 377 pounds; gain 51, or 2 7-22 pounds per day. I do not write this boastingly, for it may be beaten; but if any of my brother farmers have a mind to try the process, I do not hesitate to assure them in advance, they will not find it as great a humbug as manuring potatoes with 4 barrels of poudrette to the acre, or using a penknife blade instead of a shovel to put the manure in their corn hills.

Oyster Bay, L. I., March, 1845. D. K. Youngs.

TO PREPARE SHEEP FOR SHIPPING.

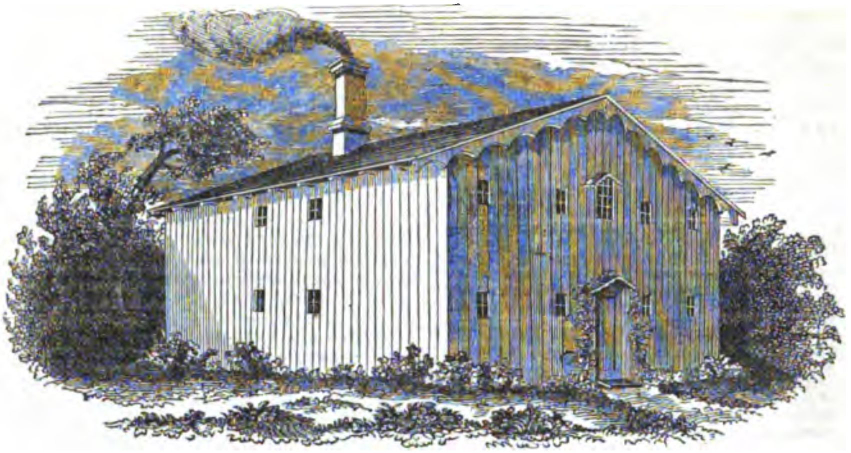
Sheep should be fed on hay a day or two before they are shipped, to change the nature of the dung, and thus prevent their becoming filthy when confined in small quarters. They should also be fed with grain one week at least before they are shipped, and also on the route, oats or other grain, regular twice each day.

The best kind of hay should be selected, and after it has been moistened a little, twist it into a rope as hard as it conveniently can be made, and wind it up into tight balls or bundles and pack it away at a little distance from the pen of animals.

By this method, the hay not only occupies the least possible space on the boat or cars, and is easily handled, but it is kept as fresh as possible, a very important thing in feeding. A small rack or box should be prepared for feeding, and cut off the hay rope for them as occasion requires.

S. W. Jewett.

The quantity of poultry exported from Dublin to England during the Christmas week, amounted to five hundred tons, and was worth 50*l* per ton.

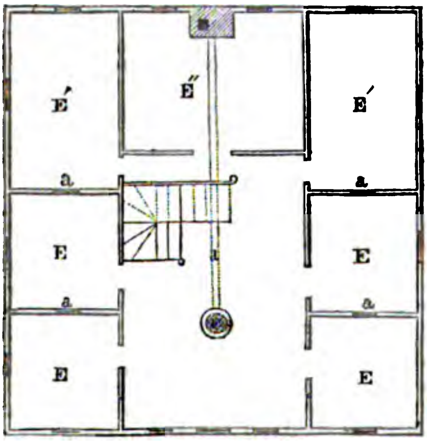


ECONOMICAL DWELLINGS FOR PLANTATION LABORERS—(Fig. 50.)

To the Hon. J. S. Skinner:*

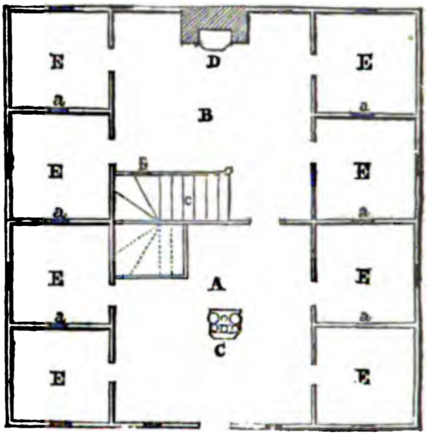
My dear Sir—I have availed myself of the earliest opportunity, which a pressure of business would allow, to prepare a brief description of the buildings erected in 1843, by my father-in-law, the late Virgil Maxy, Esq. as quarters for the field hands and their families, employed on his farms at West River, Maryland, which I promised to furnish you with when I last had the pleasure of seeing you in Washington; and I now have the honor to transmit to you, at the same time, drawings of one of these buildings, (the two being essentially alike,) exhibiting it in plan, side and front elevation, and in perspective. For these very artistical drawings, I am indebted to Mr. J. G. Bruff, of the Topographical Bureau, Washington. They are in some respects inaccurate, as will be seen from the text.

The perspective view presents a very exact picture of one of these houses, and the plans I trust will be readily understood. One of the buildings is surrounded by groups of large and venerable locust trees, with a pump of pure water near the front door. The other stands in the vicinity of a beautiful grove, and numerous young trees have been recently planted around it, as well for ornament as for protection from summer's heat and winter's cold; while a copious and never failing spring of cool and delicious water gushes out of a ravine hard by. Both houses are so situated that the down fall water drains from them in all directions.



Ground Plan—[Fig. 51.]

Explanation.—(Reference to Ground Plan and Second Floor.) A. kitchen—B. living room—C. cooking stove—D. Franklin stove—E. E' E'' dormitories—E' and E'' family rooms—F. drum—a. lattices for ventilation—b. closet—c. stairs—d. pipe of drum.



Second Floor—[Fig. 52.]

The house (to which the drawings, refer) is 34 feet square, on the ground plan, from outside to outside; and from the bottom of the sills to the top of the plates, is 16 feet high. The sills rest on stone walls, (laid in cement) sunk 2 feet below the surface of the ground, and rising one foot above it. The rooms on the ground floor have a pitch of 10 feet including the joists—the upper rooms are therefore 6 feet high to the eaves or top of the plates, and rise to the height of 10 feet along the roof. The large room E'' and the open space adjoining it, have a uniform pitch of 10 feet. All the rooms on the second floor are lathed and plastered over head. Those on the ground floor have no ceilings, below joists.

The sills and posts are of white oak—the former, 12 inches square, the latter, 8 by 7 inches. The plates are of white pine, 8 by 7, and the rafters of the same materials. The frame has no braces, the exterior covering rendering them unnecessary, and at the same time imparting to it great strength and rigidity. This covering or siding consists of 2 inch white pine plank, (commonly called ark-stuff, and costing at Port Deposit, about $8 per M.) jointed and spiked vertically to the frame. The joists are covered on the exterior with narrow slats or buttons of the same materials. The roof is rather flat, covered with white pine shingles, and projects from the walls about 30 inches all round. It is also provided, as will be seen from the drawings, with a simple kind of barge-board, cut in a rough way from pine planks.

The ground floor is formed of *cement*. The space within the sills and foundation walls is filled with clay, *hard rammed*, to within about 2 inches of the top of the sills. On this sub-stratum, the cement is deposited. It consists of a mixture of 10 parts, irregular brick fragments, rather less (in the average) in cubic contents, than black walnuts, 5 parts of clean sharp sand, and 3 parts of the best hydraulic lime. If the cement is not of the best quality, the fragments should be reduced to 8 parts; oyster shells, when convenient, may be advantageously substituted for brick-bats.

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* Furnished for the Cultivator, by Mr. Skinner.

The cement and sand are first thoroughly mixed, care being taken that no more water is used than is just sufficient to produce a slight cohesion; the great mistake is often made of employing too much water. After the mixture has been well worked, the fragments are added, with a little more water if thought necessary, and *thoroughly* incorporated with the other ingredients. When fit for use, the mass must present a perfectly homogeneous appearance. This condition of things is essential to success. It is then to be immediately removed before it has time *to set*, to the place which it is to occupy, to be deposited in a layer sufficiently thick for the purpose designed, and hard rammed with quick short strokes, until it is quite solid, and gives no more under the rammer. This operation will bring a good deal of water to the surface, from what had seemed to be a mass of materials but slightly moistened. After the whole floor has been formed in this manner, and before it has time to dry, it is *sluiced* with water, covered with clean straw, to retard evaporation, and at least twice a day for 12 or 14 successive days, deluged with water. At the end of this period, the straw is removed, and the floor is permitted to dry, when, if the cement has been of good quality, and all the operations have been properly performed, it will be found to be as hard and as firm as a solid rock, which no moisture can effect, no vermin penetrate, and that will wear as well as the best mica-slate pavement. To give it a smooth surface, it will be expedient to plaster it with a thin coating of *coal-gas-tar* sprinkled with sand. When this is quite hard and dry, the house may be occupied.

I have recently employed cement manufactured in the manner just described, for the floor of a meat house much infested with rats, with complete success.

A barrel of cement costs in Baltimore, $2,25, and is sufficient with the other materials, to make about 168 square feet of floor, 2 inches thick.[*] It would, however, I think, be better to form the floor 3 inches thick, which would make the barrel equivalent to about 112 square feet.

There is but one entrance to the house, which leads into a room 16 feet square in which is placed a large cooking stove. This apartment serves as a kitchen, and communicates with a back room of the same dimensions, in which is fitted a Franklin stove for the purpose of affording an open and cheerful fire. This may be called the living room, to which the people generally retire on coming in from labor, and to dry themselves in wet weather; but when not at work, they usually occupy both rooms indifferently. They have each two windows of 6 by 10 glass.

On the ground floor are eight dormitories, opening into the large rooms, each 8 feet square. They are lighted by windows of 4 panes of glass, so arranged that they may be opened by moving the sashes aside.

An easy flight of stairs leads from the back room to the second floor—under the stairs is a back closet for the convenience of the cook. The landing place on the second floor is in an open space 18 by 12 feet. Into this space, the rooms of this story open. Thay are appropriated to married people and children. The four smaller rooms are 8 by 10 feet—the two marked E′ are 16 by 10 respectively, and the one marked E″ is 15 by 12. The whole of this portion of the building is kept warm and comfortable in the coldest weather, by a large sheet iron drum, heated from the cooking stove. From the drum, a pipe is carried to the chimney through the room E″. In each partition, separating the dormitories, on both floors, a *lattice* is fitted, ranging with the gable windows, and over each door is left a space 6 inches square for the purpose of ensuring a nearly uniform and agreeable degree of warmth throughout the building, in wet and cold weather, and a free circulation of pure and dry air whenever the state of the atmosphere will permit the windows to be open. The vacant space in the 2d story is occupied by the children as a play room and for drying clothes in wet weather, and in summer, some of the boys prefer to sleep in it. As soon as the hot season sets in, the cooking stove is removed to a detached building, and is not brought back to its place till the return of cold weather. In the mean while, when necessary, a fire is burnt in the Franklin stove.

It will be obvious to the most superficial observer, that in planning this house, the leading objects have been comfort, economy, and the saving of fuel, in the accommodation of a considerable number of persons, rather than the study of architectural effect; and yet, as the perspective drawing shows, the *tqut ensemble* is quite agreeable to the eye. This is owing to the good proportions of the building, the flat and projecting roof, and a slight degree of simple ornament. It still wants what may be cheaply supplied, a rustic porch at the entrance. This might be formed by entwining the boughs of cedar trees, inserted in the ground for the pillars, and covering them with creeping vines. These quarters afford more room for their occupants, in proportion to numbers, than the best permanent barracks usually extend to the soldiers of an army; while on the score of privacy, warmth, ventilation and general comforts, they are also superior.

Two objections may, with some propriety, be urged to these arrangements for the accommodation of laborers: 1st, the risk of fire—2d, the greater danger from contagious and infectious diseases. To the first, it may be answered, that there are but two fires in a house, and both of them on an incombustible floor. And to the second, that from the dryness and cleanly nature of the floors, and the careful ventilation which may be always attained with little trouble, there will be less liability to contract sickness, especially typhus fever, than if they occupied (as they too often do) small and badly constructed houses; and that if a contagious disease should break out on a plantation, it would be as likely to spread among the people, from the fact of their working so much together, in the one case as in the other.

The cost of these buildings was about $700 each, and I am satisfied that similar structures might be erected in any part of the State of Maryland and Virginia far that.

Very respectfully, your ob't serv't,

Geo. W. Hughes.

GROWING LETTUCE EARLY.

Mr. Tucker—Those who are fond of lettuce, usually desire to have it as early in the spring as possible, and before other products of the garden are ready for the table. An obvious means of procuring the article early, is the hot bed; but that is not convenient for every one; though materials for constructing the hot bed should be at command, the attention and watching which it requires may not in all cases be readily spared. This consideration led me, some years ago, to make it a subject of special inquiry, whether it was not possible to have early lettuce without the hot bed.

Lettuce, it was noticed, will bear uninjured, a hard frost; under some circumstances, that which comes up in the fall, will live over winter; in which case it will grow to a proper size for eating much sooner than the spring sown plants. It seemed natural therefore to conclude that we had only to protect it from very severe and long continued frost, in order to preserve it alive till spring. With this view, I tried covering it with straw, cornstalks, stable litter, leaves, boards, mats, but invariably without success; it would all perish. This result was unexpected. What killed the lettuce thus protected? It could not be frost, for care was taken in each case to cover the lettuce so that it should not be exposed to greater cold than it endures without the least injury. Perhaps it was smothered: that is, deprived of a sufficient supply of air. But I had taken care, in one instance, to cover it with a box large enough to enclose an ample store of air. Yet here the lettuce died. While reflecting upon this subject, it occurred to me that the death of the lettuce might be owing to its seclusion from the light; which we know to be essential to the healthy growth of

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[†] Coals, lime, &c., are usually sold by imperial *heaped* measure, which makes the bushel equal to 2,815 1-2 cubic inches nearly, and I think the barrel contains about 3 bushels, or 4 8-9 cubic feet nearly.

all plants. Upon this, I made a frame with sashes to fit; sowed lettuce in it in September; put on the glass, the latter part of November, and let it remain till March, when I had the satisfaction to find all the lettuce alive and flourishing. Whether my theory was correct or not, I thus ascertained the fact, that lettuce may be preserved over winter merely by a simple covering of glass. In the spring, the lettuce grew luxuriantly, and was fit for the table as early as it would be if grown in a hot bed. The plan of growing lettuce, suggested by the foregoing fact, I have followed for several years with invariable success. If you please, your readers may have the benefit of my experience, which I will give somewhat in detail.

In the construction of the frame, in which the lettuce is to be grown, I do not know that any particular size is material. In the climate of New Haven, it is requisite that the frame should be at least 6 inches thick; mine is made of cedar scantling, laid up like a log house, with a slope towards the south of one foot in five. A board is nailed over and on the outside of the scantling. The sashes should be made like those of a hot bed, with glass lapping, so that the water may run off. Common window sashes will be broke, by water standing on the panes and freezing. The glass should be thick, to prevent breaking by the weight of snow. For the same reason, the frame should be set where the snow will not drift into it. When the sashes are on, they should lie about a foot from the ground, which should have the same slope as the sashes. There must be a contrivance to fasten the sashes, so that they shall not be blown off by high winds, and also to prevent their sliding when the upper end is raised. The manure used in the frame should be well rotted and well mixed with the soil. The same soil will not answer well, for more than four years. As often as that, either the frame should be moved, or the soil taken out and replaced by fresh earth. The kind of lettuce which I think best for cultivation in this manner, is one of the cabbage varieties—the *white head*. It forms a solid head 6 to 8 inches in diameter. The time of sowing is the middle of September. It is sowed broadcast and raked in. The frame is left open till the setting in of winter—till the ground begins to freeze hard. The sashes are then laid on the frame, and remain undisturbed till the opening of spring. No watering is required during winter; nor is it necessary to admit the external air. The glass must not be covered. Snow may fall upon it, but it will not (in New Haven,) continue long enough to do injury. When spring opens, it will be necessary in clear warm days, to raise the upper end of the sashes 6 or 8 inches. When there comes a warm rain, the sashes should be taken off. If a suitable rain does not occur often enough, it will be necessary to give water in some other way. As the ground during winter, will have dried to a considerable depth, there must be, early in spring, at least one thorough watering, by rain or otherwise, deep enough to reach the moist earth below. As soon as the open ground is thawed, lettuce may be transplanted from the frame to any warm place. That in the frame must be thinned, if heads are wished, to 9 inches apart. If the frame is small, it will be best to leave the plants about 4 inches apart, and depend upon heads in the open ground. There the plants should be set 12 inches apart. It is a common practice to pick off for use the lower leaves. This will infallibly prevent the heading of the lettuce. In gathering the lettuce from the frame, it is better to cut it off at the surface of the ground, than to pull it up. The stumps will throw up sprouts, which produce the best of seed. Indeed it is almost impossible to procure seed, otherwise. If the head is left on, the seed stalk is so wrapped up by the leaves, that it commonly decays before it breaks through. Some of these directions may appear minute; but whoever attempts to cultivate lettuce in the manner here described, will find them important to his success.

The eating of the lettuce may be performed without any special instruction. But I may be allowed to say, that a little sugar with vinegar, forms a palatable dressing, for those who do not crave egg and mustard.

I think it probable that the *principle of supplying light in winter*, may be advantageously applied in the case of other herbaceous plants, and to half tender flowers, and even to cabbages. In respect to the last mentioned article, I would suggest to those who have old window sashes, to try the experiment by making their *cabbage hole* with *windows* that will admit the sun to the cabbages within. Roses and fig trees are well preserved under glass, in the same manner as lettuce, only the sashes must be higher from the ground. NOYES DARLING.

New Haven, Conn., Feb. 15, 1845.

MANAGEMENT OF THE ORCHARD.

MR. EDITOR—Your correspondent's article on the management of the Peach orchard, (see Cultivator for Jan. p. 38,) has a strong advocate in the person of Mr. John Mason, tenant of John Gill, Esq. of Haddonfield, New Jersey, who cultivates a noble farm of 200 acres, upon which is an extensive orchard of apple trees of the finest kinds. In a late conversation with Mr. Mason, who is a native of one of the eastern States, and a very intelligent man, bred originally to a mercantile profession, he remarked,

"When I came here, I found that the orchard had always been kept under careful tillage, such management being considered essential to its well being, according to the generally received opinion; but I observed, that although the blossoming of the trees was abundant, the trees themselves soon become covered with the nests of caterpillars so thick as to give the appearance of hoar frost; while the fruit soon after began to drop off in immense quantities; what remained, being cankered, and almost worthless. I therefore determined to change the plan, and immediately laid the orchard down to grass, converting it into a hog pasture; only mowing the tall weeds that spring up during the summer, and turning in young cattle to graze occasionally. The next year there were scarcely any caterpillars' nests to be seen, the hogs picking up the fallen fruit, and destroying the malady in the bud. The year following, the evil was totally eradicated, the yield of fruit being of the finest quality, and enormous in quantity; and at present, I know no orchard so vigorous, or that promises so fair a prospect, whether for grass or fruit."

On accompanying him to the spot, I was struck with the neatness of the husbandry and the vividness of the pasturage; the thrifty state of the trees affording abundant proof of the justness of the theory practiced by my friend. The grasses were of the finest kinds, chiefly indigenous to the soil, the grazing and tramping of the hogs and young cattle having produced a close and rich carpet of the greenest verdure, and remarkably early in its growth also, for although but the 27th of February, the herd were already pasturing in it; while not a weed of last year's growth was to be seen, or any thing to impede the springing of the young crop. Upon this orchard, from sixty to eighty hogs, besides young cattle, were pastured the last year during the whole summer, which took good care of the fallen fruit; after which, more than 3,000 bushels of the choicest apples were fed to the former in the way of fattening, and for which they proved most valuable, saving a vast amount of corn.

Here I witnessed the justness of your correspondent's remarks. The orchard has become a hog pasture, where the weeds are kept down, and the necessary cultivation by tramping, has been performed far more profitably and economically than by the use of the plow; while the source of the caterpillar and the borer has been cleared away by the aid of a class of laborers whose wages have been paid in a measure by the food thus collected, at great profit and the most lasting benefit. In conclusion, and in justice to Mr. Mason's very neat and careful management displayed in this experiment, I must add, in no part of the orchard or elsewhere, did I observe a single instance of the rooting of the hogs while at pasture; all was level as a bowling green or a well trimmed lawn, with not a weed or a bush, even in the fence rows. What has been said, however, does not by any means militate against the mode every where adopted and pursued in this part of the country, of cultivating and cropping the orchard while the trees are young and small; this is a system differing in toto from that in question, which has been introduced for the purpose of preventing disease, but which it is suspected, has proved the cause of much of the evil complained of. Nor is the laying down and sowing the orchard, to be too long delayed, the crop being far better adapted to grazing than mowing for hay, or grain.

I find that the system of "rigid pruning of the peach tree" has been adopted by the Messrs. Downing at their extensive nurseries at Newburgh, and no doubt it will be attended with success; the fact that "no tree bears the knife so well as the peach," having long since been ascertained and verified by universal practice in England. And to prove my faith by my works, I have taken off many leading branches the present spring, and find the trees much improved in appearance by the operation. The experiment has led to the inquiry, whether, as it is proposed to keep the orchard in grass as a hog pasture, the mode proposed would not admit of the trees being planted thicker or nearer together, depending on the system of "rigid pruning" to keep them within due bounds and with upright heads, affording a proper degree of exposure to atmospherc influence, and a due and equal proportion of sunshine? The question is an interesting one; would your correspondent take it up?

Your subscriber, J. L.

Springfield, N. J., 1845.

ON BREEDING SHEEP.

MR. EDITOR—After looking over the pedigree of my sheep in the November number of the Cultivator, and some of the remarks at the close, I feel it my duty to give a fuller explanation of my views and experience in the breeding of sheep. It is the duty of wool growers to have three objects in view in breeding sheep—1st, they should breed that kind of sheep whose fleeces will be large enough to nett them a handsome income from the growth of their wool—2d, a kind that will produce a fine, long, and silky staple, which will be profitable to the manufacturer—3d, a kind which will, when manufactured, make a heavy body, and a durable goods for the consumer. I would here ask, is there any one distinct breed which will answer all these purposes? I know that the Saxon sheep produce fine wool, but not enough in weight to make it profitable to the wool grower.* It may be a profitable wool for the manufacturer, but I very much doubt the durability of the goods for the laboring and business part of community. The Paular Merinoes are heavy fleeced, and when well fed, have more native oil, than can pass through the harl of the wool in a proper manner—it is common for it to form a sticky substance among the wool, which makes it heavy and unprofitable for the manufacturer—they are somewhat wrinkled about the neck, and are apt to have hairs in those wrinkles, and not uncommon to have hairs on the body so as to prevent it being manufactured into fine goods, so that this kind of sheep will not answer our full purpose. It is more for our interest to grow *fine* wool in the Eastern States than it has been. We cannot expect to compete with the west on *coarse* wool. How can we grow a large fleece, of long staple, *fine* wool? I will tell you how it has been done, viz: by crossing three different breeds of pure Spanish Merinos. The most perfect of the three was the Escurial, and I believe the most perfect breed that was ever imported into America when imported by David Humphrey in 1802; in their pure state, their wool was more compact at the outer end than any that I have ever seen, and in possession of stronger felting properties. The one which was imported in 1811, was a larger fleece and a little darker at the out end of the wool. In selecting my bucks to breed from, I have even taken great pains to select those which partook most of the Escurial blood. Experience has taught me that in breeding animals, the offspring partake stronger in their outward coat and appearance of the male, in their temper and disposition of the female; in this way I have managed my sheep, until many of them resemble the Escurial sheep when in their pure state. In selecting bucks to breed from, we should take those that are of handsome form, large fleece, and long staple, in which the native oil circulates freely through to the outer end of the wool, leaving the wool within, white, like cotton. This kind of wool is free from *dead end*, cleanses easy, and is soft and silky when cleansed. That kind of wool which has a great deal of yolk lodged about in the wool wastes too much in scouring, and is very harsh and wiry and not easily manufactured into fine goods. Some gentleman in the Nov. number of the Cultivator, mentioned the *Escurial Saxon Sheep*. I have never seen any that were imported from Saxony, that bore any resemblance to those imported by David Humphrey. In Mr. Grove's letter to Mr. Colman, he states that there was an importation of Escurial sheep from Spain to Saxony in 1764, and another importation in 1777, of different breeds. This was 47 years before the introduction of the Saxony sheep to this country. I think it quite improbable at least that we have any of the pure Escurials from Saxony. Where are the 200 that Wm. Jarvis brought to this country in 1809, or their offspring? I know of no trace of the Escurial blood but what has been preserved from the importation of General Humphrey, and the one imported in 1811.

In looking over a communication of Mr. L. A. Morrell, in the April no. of the Cultivator, 1844, he assigns a number of reasons why wool of the same fineness would be some of it dry and harsh and some soft and silky. I think if he had raised the same breed of sheep that I have, he would have assigned a different reason. I will here repeat some of my remarks, and speak a little more particularly of the kind of sheep and wool which I have raised. The complexion of the wool is dark at the outer end, white within, is always soft, and after being cleansed for use, remains soft and oily. The reason I give, is this; it has been ascertained, and acknowledged I believe, that every harl of wool is a hollow tube; when the perspiration is open, the native oil passes through these tubes. This native oil preserves the life of the wool, renders it free from *dead end*, and leaves it in full possession of its felting properties; and I very much doubt, when cleansed for use, whether this oil in the centre of the harl is ever all extracted, for it always feels oily, and the goods made from it are soft and silky. This native oil has its desired effect. It preserves the health of the sheep, the life of the wool, and adds to the strength and durability of the goods.

Manufacturing men have sometimes found fault with this kind of wool because they are large fleeces; would it not be honorable in them to keep both *debt and credit*? If the wool wastes a little more in washing, and is a more perfect and valuable article when washed, the account is balanced. I am satisfied so far as the experiment has been tried, that there is no kind of sheep as profitable, uniting the interests of the wool grower and manufacturer. Some gentlemen are of the opinion that the Saxony breed of sheep should be kept pure, and not crossed with any other kind; but I think that a mistaken idea. I think there is a very great benefit derived from crossing different breeds. But we must have pure blood male animals to breed from. It is our duty as farmers to make all the improvements in the different branches of agriculture which we are capable of. The agricultural and manufacturing interests are closely linked together; whatever affects the one, affects the other more or less. We should endeavor to draw together, and work for each other's interests. The wool grower must breed a kind of sheep whose fleeces will yield him a living profit; we cannot live from the two pound fleeces; and while our manufacturers ask for a protective tariff, which they really need, and which we wish them to have, we wish them to remember that the farmers in the Eastern States need *protection* to. I will here leave my subject for the present for my worthy friends to correct.

Watertown, Litchfield co., Ct. JACOB N. BLAKESLEE.

WORKING OXEN.—At the last Fair of the Middlesex (Ct.) Ag. Society, four ox teams, attached to decorated carts were present, numbering 214 yoke, viz: Team from Middlefield and Long Hill, 96 yoke—South farms, 84—Westfield, 26—Joel Blatchley's, of Durham, 8 yoke.

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* The remark in regard to the Saxon sheep not producing wool enough to make them profitable, we think is rather too *sweeping*. We could name flocks of Saxons, which have undoubtedly afforded good profits.—ED.

IMPROVEMENT OF FARM STOCK.

Mr. Editor—In a communication published in the June no. of the Cultivator, 1844, page 189, I endeavored to bring this subject before your readers, in the hope it might attract the notice and engage the attention of some of your corresoondents, who can appreciate the importance of its bearing on the great agricultural interests of the country. It is believed that if this branch of agriculture should be brought to the test of a careful and critical examination, the result would prove that few even of those who are most interested have considered the magnitude of its importance. Entertaining this opinion, permit me again to present some remarks, having the same object in view, with the hope that others may take up the subject, and present arguments and facts, illustrating its importance.

In the remarks which I now propose to make, I shall confine myself to the subject of the improvement of *dairy stock*. The question then is, how can this improvement be successfully accomplished? It must be acknowledged there are some difficulties in the way, which should be met and overcome before any considerable progress can be attained.

One of these difficulties I apprehend, will be found in a lamentable want of interest, and an indisposition among the great mass of our agriculturists to fix their minds upon the subject, and engage in persevering and untiring action. Another obstacle, I apprehend, is a prejudice in the minds of many well meaning men, against what is termed "improved stock," without ever having really tested its merits. Formidable as these and other obstacles are in the way of improvement, yet when the mind contemplates the American character, its accurate discernment, its enterprise and its perseverance, when fully engaged in any pursuit worthy of its consideration, and when the understanding has become convinced of its practicability, who can doubt of ultimate and entire success?

With a view if possible, of directing public attention to this subject, and engaging others in active co-operation, I have recently cast my eye over the official statistics of the United States taken in 1840. By this public document, it appears that there was in the County of Rensselaer that year, a fraction of over 66,000 neat cattle; and as a basis for calculation, suppose one in ten of this number to be appropriated to dairy purposes, then the number would be six thousand six hundred. From the inquiry I have instituted, I am led to the conclusion that the dairy cows now in use in this State, do not average more than from four to five pounds of butter a week, for seventeen weeks, say from the 1st of May to the 17th of August. Call it five pounds, and the average product for 17 weeks of each cow, would be 85 pounds, and the total product from the 6,600 would amount to 561,000 lbs. which at 12½ cts. a pound, would amount to $73,320.

As a still further illustration, by a reference to the same official document, it appears that there were in the State of New-York in 1840, 1,911,244 neat cattle. By applying the same rule as above, (one in ten for dairy purposes,) there would be in the State 191,124 dairy cows. Suppose the product in butter to be an average of 85 lbs. for each cow for the 17 weeks, the total quantity produced from the 191,124 cows would be 16,234,540 lbs., which at 12½ cents a pound, would amount to $2,029,692.

Now if the milking qualities of the dairy stock of the county of Rensselaer should be improved so as to produce 10 lbs. of butter a week, for the period above stated, the product from the same number of cows would be 1,122,000 lbs. which at 12½ cents a pound, would amount to $134,640, creating an increased amount of product of $67,320 in the county of Rensselaer alone for the profit of those engaged in this branch of husbandry.

By an application of the same rule of calculation to the dairy stock of the State of New-York, the result would stand thus. The product in butter would be 32,469,080 lbs., which at 12½ cents a pound would amount to $4,059,385, exhibiting an increased product to this branch of husbandry in the State of $2,029,692.50 for the 17 weeks, and a considerably larger amount per annum. It will be seen that if these calculations approximate to accuracy, the subject is of great importance to the agriculturists of this country, and can hardly fail to force itself at once upon every reflecting mind.

The question then is, have we a breed of cattle among us which will produce 10 lbs. of butter a week for 17 weeks of the most favorable season of the year, on pasture alone. My belief is, we have now in this country, dairy stock, among the improved breeds, which may be relied on to produce nearly or quite that result, and by careful, systematic breeding, it may be still further improved.

If this opinion be correct, it becomes an important inquiry, how is it to be made available? And what means should be instituted to promote and insure success to the undertaking.

From the reflection I have been able to give to the subject, I am inclined to the opinion that much may be accomplished through the medium of the State and County agricultural societies; and the fact should not be lost sight of, that the bounty of the State is contributed to promote this, among other kindred objects.

Should the State Society appropriate $300 of its funds to premiums, fixing the highest at $75, and graduate down to $10, for the greatest quantity of butter made from a given number of cows, to be kept on *pasture only*, for a perid of 30 or 60 days, it is believed such premiums would stimulate numerous dairymen throughout the State, to competition, as the premiums would be a compensation for the extra trouble attending the trial. It may be objected by some, that so large an amount could not well be appropriated to this single object; in answer to such objections, it may be said, the State extends its bounty for the improvement of agriculture, and it will be expected that this bounty will be so appropriated as to effect the greatest amount of improvement.

Time will not allow me to say all I intended to have done, but in a future number may resume the subject. In conclusion, permit me to remark, that to insure the greatest amount of benefit to this branch of husbandry, I cannot conceive any better plan than the one indicated above, as it will afford a wide field for competition, and the owners of the different breeds of cattle will have an ample opportunity to test their real merits, and then the great mass of farmers will be able to decide for themselves whether the Durhams, Herefords, Devons, Ayrshires, or Natives, possess the best dairy qualities, as this information would be spread out in the reports of the transactions of the State Society. This being faithfully done, each individual could not fail to be able to decide which is the best dairy stock; he could then make his selection understandingly, and improvement could not fail to be extensively promoted through the State and the entire Union. C.

Troy, January 5, 1845.

INSECTS INJURIOUS TO WHEAT.

Mr. Tucker—During the summers of 1843-44, the wheat in this neighborhood had suffered considerably from the depredations committed by a small green worm about an inch in length; its head is brownish green, with two brown spots upon it. The worm ascends the stalk of wheat soon after it has put out in head, cuts off the head and feeds upon the top of the standing part.

If the evil increases as rapidly in future as it did last year compared with the year before, there will be but a small chance for any wheat in this section of country. I do not know of any person having seen any other crop injured by the worm, neither did any one observe them before the heads of wheat had fallen, nor know what they had previously fed upon. Some think they are what have been called the army worm, but I have been unable to find any description of that species in either the late numbers of the Cultivator or Farmer's Cabinet. If you are acquainted with such a mischief-maker as I have somewhat described, will you please favor us with any information or any remedy, if there is one.

In some fields, one-fifth of the heads of wheat were eaten off; and the Mediterranean was more injured than other kinds. The ravages as far as I have heard, are confined to a few miles of this place. P. C.

Penn's Manor, Bucks Co. Pa., April 5, 1844.

NOTE.—The worm described above, is new to us. As to its being the "Army worm," we would observe that the common names of insects are so various that nothing definite can be learned from them. We are unable to find a description of the Army worm in any entomological works; but have heard that name applied only to a species of the *Agrotidida*, or cut-worm family, between which and the insect described by "F. C." there would seem to be but little similarity.

CONDENSED PARAGRAPHS.

MR. EDITOR—Under this head, I send a few articles for your paper.

PREVENTION OF THE BEE-MOTH.—Col. Nathan Beckwith, an old and experienced agriculturist of this town, informs me that the bee-moth may be effectually destroyed by placing, during their active season, near the hives, a few basins of honey and water (made weak,) after night-fall, and removing early in the morning. They are attracted to it and drowned.

CISTERNS.—Those who design putting down a new cistern, (and no house should be without one,) will find it much to their advantage to use water cement. Take a dry time in the summer, and dig a hole with sloping sides, sufficiently large and deep to contain the desired quantity of water, below the frost. Then mix the cement with equal parts of washed sand and spread it upon the ground two inches thick—carefully exclude the water for ten days, when it may be covered in the usual way, and is ready for the rains. Remember about the frost, and it will last forever.

PROTECTION OF COWS AGAINST FLIES.—As the "fly season" is approaching, I am reminded of a discovery I have made, (which should have been made public before,) to prevent the annoyance of cows by flies while milking. It is simply, blanketing. A blanket should be provided for each milker, of such ample dimensions that it will cover the whole animal, falling down as low as the knees, with the right corner scolloped out for the milker. Make a loop for the horns. It may be made of any material, but coarse cottons being the cheapest and lightest, recommend themselves. Animals unused to blanketing, will of course at first demur, but by gentleness or slight coercion, they soon become as gentle to the spreading of the blanket, as they are to the approach of the milker. Try it—"it works like a cham."

Tivoli, N. Y., 1845. G. COOKE.

TRIMMING GRAPE VINES.

CORRECTION.—Mr. SIDNEY WELLER, of Halifax, North Carolina, informs us that we made a mistake in condensing his article on grape vines, in our March number. The produce of his vineyard is there stated at "eight to ten barrels of wine yearly." Mr. Weller says it should have been that the *annual increase* is eight to ten barrels, &c., the whole product of the vintage being from twenty-five to thirty barrels of wine. He would have made more last season, but for a long drouth, and a high wind which occurred at a critical time and injured the crop. He thinks the vine "will stand a severe spell of dry weather, as well if not better than any other sort of farm product; but the effect of a very long continuance of dry weather, causes some of the grapes to dry up and others to fall off the vines prematurely ripe." Mr. Weller is a pioneer in the grape culture in North Carolina, and we think his practice well worthy the attention of others, and would therefore invite the perusal of the following brief sketch of the course pursued with his vinery. He says—"first, it is very important to have the right kinds of vines, or such as not only bear well, but are not subject to tantalize the cultivator by rotting. The Scuppernong, Norton's Virginia seedling, my Halifax seedling, &c., are of those kinds, and are all large fruit, and excellent for the table or wine.

"I plant the rooted vine as a fruit tree; say 10 feet apart each way; or if Scuppernong, 20 or 30, and put a high stake to the north side. I trim 2 or 3 years, to prevent the vines from becoming bushy, and give all the strength to one or two main stems. Then take out the stake and insert a post 8 or 10 feet high, square at top, with two cleats on each side to secure a rail or piece of timber to lay from post to post, to help support the scantling, and form the scaffolding. After this, I suffer the vines to take their own course pretty much in ramifying over the support above; and scarce ever trim any more; and if I do, I simply cut off a branch and let it remain to decay and fall away of itself. Any part decaying or giving way is easily replaced by propping up, and another inserted. Instead of digging holes, I make them by what I call a jabber, or a large pointed piece of hard wood, with a peg inserted across towards the top, by which with a crow bar or stake, the jabber is drawn out of the ground after being pounded in, at a wet time, by a maul or beetle. In this way, it is much less trouble to keep up a vineyard and manage it, than might be supposed. And as to trimming, or saving all or most of the perpetual European labor, in that matter, I believe it the true "American plan," and I see others of your correspondents stating also to this amount. In short, I believe to entirely succeed in grape culture and wine making; the kind of grapes, manner of managing vineyards, and process of wine making must be our own, or *American throughout*, or the *European* will not do in our country."

PROFITS OF POULTRY—KEEPING EGGS.

MR. EDITOR—I ask your attention, while I give you a statement of my attempt to profit, in rearing of poultry. I am a mechanic, hire a house and lot; and I wish to submit for the benefit of others in similar circumstances, the results of attempting to profit by poultry. I saw in the Central New-York Farmer, a statement of Master Geo. Bement, upon the subject in question, and that has induced me to ask a place in your invaluable paper for this article.

The result is for one year, ending the 1st of Dec. 1844, as follows:

Dr.	*Poultry Establishment.*		*Cr.*
35 Hens,....................	$4,38	88 Hens,................	$11,00
1 Top Knot cock and hen,..	1,00	1 Top Knot cock & hen,	1,00
Grain for feeding,..........	18,67	3,115 Eggs, ...	32,45
Rent of yard and barn,....	15,00		
Cost,....................	$39,05		$44,45
			39,05
			$5,40

Thus you will see that I have a clear gain of $5,40, after paying the enormous rent for the use of the barn and yard. My own labors I count as nothing, because they were given before and after each day's labor.

The yard in which the poultry were kept, is a triangular area, surrounded by a high picket fence; through the center of this yard, a stream of water passes, affording the poultry all the drink they needed; and in the center of the yard, there is a bed of coal-dust; and what is not a little novel, each hen had her particular place in which she rolled.

I will however, state that the stock hens had increased from 35 to 88, and that the increase is 53. I hope this effort will spur on others who think they will TRY to do something to live, to make their way through the world in the best mrnner possible for the convenience of themselves and families. Much can be done to render less the sufferings incident to man; and we are hereby admonished of the truth of the adage

He that by the plow would thrive,
Must either hold himself, or drive.

PRESERVING EGGS.—My manner of keeping eggs so that they will be fresh, is as follows: I place a layer of saw-dust in a keg, then pack the eggs closely to each other with the *small end down*, to prevent the yolk passing through the white of the egg, over this, place another layer of saw-dust, packing closely to and between the eggs, where they do not touch each other, and so on to filling the keg; then head it tight, and change it end for end every 24 hours. In this manner, eggs will keep a year, and be as fresh as the day they were laid.

Westmoreland, Feb. 10, 1845. PHILIP SMITH, Jr.

SOILS WHOSE CHEMICAL COMPOSITION GIVES THEM PERPETUAL FERTILITY.

Mr. Editor—There are some very choice pieces of land which I will call lake *intervales*, dispersed here and there along the shores of the middle and northern portions of the Cayuga and Seneca Lakes. A. Durkee, has a farm half a mile south of the village of Union Springs, on the eastern shore of the lake, seven miles south of Cayuga Bridge, which embraces a strip of this all enduring soil, of many acres, next to the lake shore; its subsoil is a calcareous soft gravelly shale, the surface a dark friable loam. This intervale has been under cultivation more than forty years; for the last thirty years it has borne alternate crops of corn, oats, wheat, and latterly wheat and clover, without any other manure than plaster; all the animal manures of the farm being distributed on the higher land. As there has never been any perceptible diminution of crop, Mr. Durkee takes no pains to increase his organic manures; as soon as his wheat is threshed, the straw is committed to the flames; little pains is taken to save even the ashes of the straw; yet so far from being a careless improvident farmer, Mr. D. is one of the neatest, most thriving, industrious farmers, in a county proverbial for good farming. The land bounded by those lakes, is invariably first rate, unless it is in some places towards their southern extremities, where it rises with too great precipitancy to be strictly arable; but it is only here and there, on a low narrow intervale of aluminous schist, underlaid by soft shales, and the limestone ledge, that a semper fertile soil is found. A small portion of the soil bordering those lakes, is a heavy sandy loam, originally covered with beech, maple, bass wood, &c.; another portion is a stiff clay loam, intermixed with pebbles, covered originally with oak and hickory trees; in other places, particularly near the Cayuga lake shore, in Fayetteville and Springport, the soil is a greasy oak bearing clay, rich in lime, marl, &c. without stone or gravel. More money has been made by John Dysinger in raising wheat and clover seed on this soil, within the last thirty years, than would obtain belief, should I name the amount. Yet for all the purposes of summer cropping, this soil is next to impracticable, requiring the aid of long manure, and fall or winter plowing, the frost alone can render it permeable, and the long manure ameliorates its subsequent adhesiveness.

I consider that the experiment on the soil of Mr. Durkee, goes far to disprove the Berzilian theory, that humus in the soil is the main source of vegetable nutrition; and to establish the theory of Liebig, that plants derive their sustenance mainly from the atmosphere, positively requiring little more from the soil than their inorganic bases. We are told by David Thomas, that on a dry prairie near Vincennes, Ind., Indian corn had been annually grown more than sixty years, without any sensible diminution of crop, although no kind of manure, animal or mineral, had ever been applied to the soil. Such a soil must be rich indeed in available salts, and the metallic bases. The analysis of various soils by Prof. Sprengel, clearly establishes the fact, that the most enduring soil contains the smallest portion of soluble humus, while the barren heath contains the largest portion of vegetable humus, both soluble and insoluble. S. W.

Farm Accounts.—We make the following extract from the excellent Address of J. W. Proctor, Esq.—"In the agricultural, as in the trading community, property will not adhere that is not cemented by labor. The young man, therefore, who sets out to be a farmer, must look about him and see how farming can be supported, what kind of crops there are that will pay for themselves and yield something. He must so manage as to make both ends meet. I cannot too strongly urge upon him the necessity of keeping accurate minutes of what he does, and of making exact estimates of the result of his labors and experiments. Nothing is more detrimental to good husbandry than uncertain conjectures. Though the result of our operations may not correspond with our wishes or expectations, we should not close our eyes upon the facts. Truth, exact truth, will ever support itself, and him who cherishes it."

CONDENSED CORRESPONDENCE.

Mixed Husbandry in Mississippi.—We give the following extract from a private letter from a subscriber in Amite Co.—"I reside in what is here called the *Pine* Woods, and follow a mixed husbandry, being content to raise four bales cotton to the hand. My farm has, however, afforded me a better profit the past year, than many farms where 8 to 10 bales to the hand, have been raised. I find a ready market for all the pork, beef and grain that I have to spare, and find no difficulty in disposing of all my surplus stock to my more wealthy neighbors west of me."

Locust Borer destroyed—Spirits of Turpentine.—Mr. Z. P. Mason, of Jordan, says—"My locust trees last spring, for the first time, were attacked by the borer—on examination, I found from 20 to 50 in a tree. With a knife I cut off the bark directly over the place they were at work in the wood and applied spirits of turpentine to the place, inserting it when necessary, into the holes with a feather. This was effectual, as no more borers made their appearance during the summer. The trees did remarkably well after the application of the turpentine, the incisions entirely closing up during the summer. Now it is barely possible that I found *all* that were on the trees—if so—*all* were killed—but it is reasonable to suppose some escaped the *direct* application—did not the turpentine circulating with the sap drive and keep them away?"

Early Blossoms.—Mr. N. Parker of Trimble county, Ky., writes that he had Peach and soft shelled Almond trees in bloom on the 22d Feb. last.

Large Eggs.—A correspondent at Providence, R. I., informs us that Mr. D. Chase has a Poland hen, that in one week laid three eggs weighing 3¼ ounces each, beside one or two others about the common size."

Marking Fruit Trees.—In a late letter to us, Col. Randall of Cortland, says—"I can tell you a cheaper and handier way of marking apple trees than the one published in your last; which you can publish in your correspondence, if you see fit. On a leaf of his farm-book, let the farmer put down a *map* of his orchard thus, every dot standing for an apple tree.

⊗ ⊗ ⊗ ⊗
R. I. Greening. Strast. Spitzenburg. Gilliflower.

⊗ ⊗ ⊗ ⊗
Golden Pippin Tallman Sweeting.

⊗ ⊗ ⊗ ⊗
Fall Pippin.

The upper part of every map is north. Then by counting rows, and the number of the tree in the row, the tree represented by each dot can be readily identified, and the name of the fruit should be put down under each as above."

Potatoe Rot.—We have received from "G. S.," a respected correspondent at Pendleton, S. C., a well written article on this subject, which nothing but the great press of communications, prevents us from publishing entire. The conclusion to which "G. S." has arrived, after much consideration of the subject, is, that "a superabundance of water, or sap in the potatoe, is the immediate or proximate cause of its premature decay." In reference to a remedy, he says—"it is *depletion*, which in many instances must follow *repletion*, to save life. In other words, I would suggest (whenever it is discovered that the rot has commenced,) the propriety of cutting off the tops just above the surface of the bed, and in one or two days afterwards, to dig the potatoes. It will be found on the day following the cutting, that much water has been discharged from the standing stumps, and that the potatoes have been effectually drained of their engorged sap. This operation, I feel well assured, will very much improve the quality of the potatoe for immediate table use, and I do believe ensure its preservation." We have heard before, the suggestion in reference to cutting off the tops. We are not certain that doing this *after the blight had struck the tops*, would injure the tubers—we rather think it would not, and hence we see no objection to trying the remedy of "G. S." But it may not be amiss to remark that we believe cutting the tops from *healthy* potatoes while the tubers are growing, is injurious. This has been proved by our own experience. It will be noticed that "G. S." advises digging the potatoes in a day or two after cutting off the tops. He may not perhaps be aware of the fact that the blight in many cases has attacked crops before the tubers were half grown. As to the propriety of digging, under such circumstances, we are undecided. In some cases, we have heard of the potatoes being dug as soon as the tops had become blackened by the disease; in others, they have been left in the ground till late in the season; but the results of either practice have not been so uniform as to justify us in saying which should be recommended.

Rot in Potatoes.—J. Stillman, of Schenectady, in a letter on this subject, informs us that he has been familiar with the phenomenon of honey dew, for more than fifty years, and feels confident that it has no connexion with disease in the potatoe. Since reading the remarks of Dr. Jackson in the Nov. number of our last vol. Mr. S. says he has made many inquiries of observing farmers, but has found only one that had noticed the honey dew; and though this man has frequently seen it on the leaves of trees and vegetables, he has never witnessed any of the blighting effects ascribed to it by Dr. Jackson and Mr. Boyd. Mr. Stillman thinks that after all the discussion on the potatoe disease, "we are probably as far from the truth as when we first started." He has no faith in obviating the disease by raising new varieties from the ball, because it is not the *oldest* kinds that are most affected—for example, the "old fashioned reds," he says, are the least affected of any kind he has known. But whatever may be the cause of the disease, Mr. S. advises *early planting* as much safest—this he has proved by several experiments, and it will be seen agrees with our recommendations in the April number.

Rot in the Potatoe.—Mr. D. K. Youngs of Oyster Bay, (L. I.) says—"The earliest planted on dry ground were not much injured—the late ones, and those on low ground, were worthless, and this without regard to the quality or kind of seed." Mr. Y. will have seen our opinion on this subject, which he asks for, in the April number.

A Challenge.—"Will the editor of the Cultivator have the goodness to state for the information of the cattle growing community, that the Empire State is challenged to produce a better pair of five years old cattle than is now owned by Daniel C. Mason of New Hartford, Oneida Co., to be shown at the next State Fair."

Cure of Scours in Sheep.—Mr. N. B. Pinny, of Plymouth, Windsor Co. Vt., informs us that he and his neighbors have tested the efficacy of Mr. Jewett's mode of treating sheep for scours—(see another part of this number.) In connection with this, he relates an incident. Some years ago, his neighbor subscribed for the Cultivator, but took it only one year, thinking that as it was published "out of his own State," it could hardly contain a dollar's worth of information adapted to his wants. In the course of the past winter, his neighbor called one day to inquire for a remedy for the "scours," by which he had lost several sheep and was in a fair way to lose more. Mr. Pinney lent him a number of the Cultivator containing directions in the case. He pursued the course recommended, saved his sheep—became satisfied of his misjudged economy in not taking the Cultivator, and has accordingly again subscribed for it.

Shedding of wool by Sheep.—Mr. E. B. Brown, of Mystic, Conn., informs us that his sheep were found, during the past winter, to shed their wool, which he attributed to their having eaten freely of some species of Juniper on which they had been allowed to browse. On keeping the sheep from the Juniper, the wool ceased to fall off.

The season in Alabama.—A. McDonald, Esq. of Eufalla, Ala., writes under date of 28th March, that the winter had been favorable to the preparation of the ground for the reception of seed, in that section, and that the spring had also been warm and pleasant till within ten days of the time of writing, when the weather had turned suddenly cold, and several frosts occurred that cut down the corn. The planting of corn on Mr. McD.'s farm, was commenced on the 26th Feb., and finished on the 12th March. He says the corn that was bitten down, will not be materially injured, as it is only the blade that is affected. Mr. McD.'s oat crop was sown the last of November, stood the winter well, and will be fit to cut the early part of May. Cotton planting was commenced in April.

☞ Mr. McDonald wishes some correspondent of the Cultivator would give the proper management of the sugar cane—the time of planting, quantity of cane per acre, mode of cultivation, grinding, and the preparation of the syrup, &c. Also directions for cultivating coffee, the olive and madder—where seed can be obtained, &c.

Grafting on Peach Stocks.—Extract of a letter from a gentleman at Holly Springs, Miss., dated Feb. 27, 1845. "There is a gentleman in this vicinity who cultivates and raises fruit trees for market; he engrafts all his varieties of plums, almonds, apricots and peaches, into the peach, with complete success, in getting them to live; his plan is to graft every thing—has never followed the system of budding. All the communications that I have seen on the subject of grafting into the peach, represent a failure on the part of those who have made the trial. The success of this gentleman does not arise from any thing new in the execution of the work; he does that in the usual way; inserts the cutting at the surface of the earth, and draws up some loose earth around it. My opinion is, that his success depends on the time of grafting, which is at the time of the first moving of the sap, before the tree has commenced to put forth its leaves. This work has been done by him some days since. The peach, and some kinds of plum, apricot and almond trees, are now in full bloom; oats have been planted, and in some instances, corn, in our county. Winter has been mild and pleasant; no cold weather, and but little rain."

Mr. Geddes' experiments with corn.—"A Subscriber," at Northampton, Mass., says he "would suggest to Mr. Geddes to cultivate the ground upon which he experimented with corn last season, for a series of years without manuring, or until that which was manured, would produce no more than that which was not manured, as he will thereby not only test the relative value but the *real* value of manure. I have never seen an experiment where the real value of manure has been ascertained."

Warm bath for lambs.—At one of the agricultural meetings held here last winter, several gentlemen spoke of the advantage of the warm bath for resuscitating young lambs that had become chilled. Mr. S. W. Jewett also recommended the practice in our February number. A correspondent at Northampton, informs that he has practiced it for several years. He says, his "manner is to immerse the lamb in warm water for a few minutes, then roll it in a wollen cloth and put in a warm place till it becomes dry and shows signs of hunger. It will generally get along without any further nursing. Should the extremities be frozen, which is sometimes the case, the frost must be taken out with *cold* water. I prefer absorbing the water with flannel to rubbing it off, as it is somewhat upon the principle of *steaming*." He states that the mode has been successful with him, and he can therefore recommend it to others.

Poudrette.—H. B. Glover, Esq. of Newtown, Ct., informs us that he has tried Poudrette two years in succession on corn, a gill to a hill, put in the hill on top of the corn at planting time, and has found at gathering the corn, in the fall, no difference either in quantity or quality, from that which was along side of it, and treated equally the same except the poudrette. It is true, he says, "there was a slight difference in the color of the leaves, when it first came up, and the poudrette rows started a little the most vigorously at first, but the other rows in one month had overtaken them, and no difference could be perceived. I am satisfied that it is not a profitable manure, (at present prices,) for me or farmers in this vicinity to buy, when stable, gypsum, ashes, lime and other manures, can be bought as at present."

Finish planting gardens and fields.

THE CULTIVATOR.

ALBANY, MAY, 1845.

TO CORRESPONDENTS.

Communications have been received during the past month, from S. B. Buckley, A Subscriber, G. Cooke, S. Weller, E. B. Brown, N. Darling, Mrs. N. Darling, Z. P. Mason, J. Stilman, H. B. Glover, L. Feutchtwanger, D. Griffin, N. P. Atkinson, J. L., J. P., Richmond, Wm. Makinster, Alex. McDonald, E. M. Chapman, D. G. Mitchell, J. A. Jones, L. F. A., F. C., G. S., D. F. Barker, Publius, A Delawarian, Thomas Collins, J. P. Norton, Jno. Girdwood, (of Featherhall, Midlothian, Scotland,) M. W. H., A. L. Bingham.

We are under obligations to Mr. Wm. Burling, for a copy of his Address before the Ontario Agricultural Society—To A. G. Summer, Esq., Editor of "The South Carolinian," Columbia, for Tuomey's Report on the Geological and Ag. Survey of S. Carolina—To Wm. Mackenster, for the reports of the Viewing Committees of the Midelesex (Ct.) Ag. Society, for 1844, together with the Address of E. A. Elliot, Esq—To Wm. Bacon, Esq., Richmond, Mass., for the 8th Annual Report of the Board of Education of Massachusetts—To Greeley & M'Elrath, the publishers, New-York, for "Popular Lectures on Astronomy. by M. Arago, with extensive additions and corrections, by Dr. Lardner—To Elwanger and Barry, of the Mount Hope Nursery, Rochester, for grafts of the Northern Spy—To Hon. N. Darling, New-Haven, Ct., for some ears of the early sweet corn, described in our paper of Jan. last—To J. P. Fairbanks, Esq., St. Johsbury, Vt., for nos. of the Caledonian newspaper—To Col. A. M'Donald, Eufalla, Ala., for nos. of the Southern Shield, containing proceedings of Barbour county Ag. Society—To Hon. J. A. Dix, U. S. Senate, for "Report to the Navy Department, on American Coals, by W. R. Johnson," a valuable volume of 600 pages, and for Mr. Ellsworth's last Report—To C. H. Bryan, Esq., for the prize List of the Livingston Ag. Society, for 1845—To ——— for Proceedings of the Virginia State Ag. Convention, at which a State Ag. Society was organized under circumstances promising much for its usefulness—To A. Randall, Ed. Plow Boy, Cincinnati, for the Proceedings of the Hamilton County Ag. Society—To Mr. A. L. Bingham, Cornwall, Vt., for beautiful samples of wool from his flock of Merinos—To Greeley & M'Elrath, publishers, for Part I. of "Popular Lectures on Science and Art," by Dr. Lardner.

J. P. N., (Edinburgh)—We are greatly indebted to Mr. Norton, for the "series of practical papers, he has procured for the Cultivator, from one of the best farmers of the Lothians, a body of men confessedly surpassed by none in any part of the world." Mr. Girdwood's first communication will appear in our next number, and we need not say that we heartily second our friend Norton's request for a continuance of his favors.

S. W. J.—The drawings of "Black Hawk," and the Leicester Sheep, are in Mr. Pease's hands. The drawing of Mr. Bingham's Ram, will be engraved as soon as the others are finished.

N. P. of Bedford—Your paper was sent March 19, as soon as ordered.

☞ A large portion of our March number were, through the oversight of the printer, printed with several of the pages transposed, very much to the annoyance as well as to the injury of the volume.

Z. P. M.—The specimens of Marl have not been received.

A. C. S.—We cannot make room for the subject to which your article is devoted, with the present press of matters [illegible] immediate and practical interest, upon our [illegible] be given at some future time, if we can make room for it. The same remarks will apply to the communications of "J. A. Jones."

Clearing Land.—We should feel obliged if some one who is acquainted with the subject, would give us an article on the best mode of clearing land from the forest. Information is particularly desired in relation to the expediency of burning a large portion of the growth on the land. On what kind of soil is that practice most beneficial? And is it injurious on soils of any description? Does burning out the organic or vegetable matters, sometimes leave soils, after the action of the alkalies has subsided, too heavy and inert? If so, what course of clearing should be adopted instead?

MONTHLY NOTICES.

Mr. Colman's European Agriculture.—Part III of this work is now in press at Boston, and will be issued early in the present month. In this number, Mr. Colman treats largely on the subject of Agricultural Education, embracing notices of the Schools at Glasgow, Templemoyle, Brookfield, Larne and Ealing, and concludes this subject with a "Plan for an Agricultural Institution for the United States." Among the other contents of this part, are articles on the Elevation of Agriculture as a pursuit and profession—Rural Manners in England—A Pencil Sketch—Life in the Country—Veterinary College—Museum of Economic Geology—Guano, &c. &c.

Dr. Lee's Report.—We give in this paper, the Report recently made by Dr. Lee, chairman of the Committee on Agriculture in the House of Assembly of this State, and invite for it the serious consideration of our readers. Its facts and suggestions are of great importance, and are well calculated to induce reflection by those who obtain their living by manual labor. The weight which presses with so much force, and binds so large a portion of our rural population to continual and unmitigated toil, is set forth in a strong and effective light. The necessity of teaching our young men how to produce a good living, and how to keep and enjoy the proceeds of their labor, rather than how to acquire the earnings of others by speculation or other means, is forcibly illustrated; and the remarks on the advantages to be derived from the improvement of the minds of the laborers, commend themselves to the good sense of every one.

We have seen with regret that this document has been denounced in one or two instances, as of "agrarian tendency," for we are sure that nothing could have been farther from the intention of the writer, and also that he has used no language which can properly be so construed. Dr. Lee's object was to show the difference between the value of the labor of the ignorant and the intelligent, andt o impress upon the Legislature their obligations to dispense their bounty, so far as in their power, so that it may, like the bounties of Him who has provided for seed time and harvest, reach every one who will avail himself of its benefits. To make the contrast more impressive, he cites the difference in the rewards which are bestowed on the cultivated and uncultivated mind. Whatever opinions may be entertained as to the *expediency* of putting forth prominently some of the positions of the Report, we imagine there are few persons who will undertake to show that these positions are untrue. It is much easier to denounce an article, than to show by fair reasoning that it is false or unsound.

Melons and Squashes.—We are indebted to George H. Patrick, Esq., P. M., Locust Lane, Va., for seeds of a Watermelon, produced by himself, which he thinks the best he has ever seen—also for seeds of the Nutmeg and Canteleupe Melons, and Cushaw Squash. Of these, Mr. P. says—"The Nutmeg is a small round fruit, from 3 to 5 inches in diameter. The Cantaleupe is a little larger, and in shape more like the common muskmelon. Both should be taken from the vines when they have the appearance of being green, just as the stem begins to crack or separate from the melon, which it will do when the melon has that fine perfume peculiar to itself. They should be put in a cool room for two or three days, when they will be fit for use. One of the Nutmeg Melons will perfume a large room. The Cushaw or Kentucky Squash matures early, and is much superior to the pumpkin, cooked in the same way, or in much less time, with as little water as possible—or cut open and baked in an oven with the rind on, and served with butter."

Grafting.—We have received from Mr. Pond, of Bucksport, Maine, a specimen of a mode of grafting practiced by him and others in his neighborhood, with success. It differs in some respects from any other mode we have seen, though it is somewhat similar to *tongue* grafting. Mr. Pond thinks it has advantages over any other mode for stocks not more than an inch in diameter. The chief difference in this and tongue grafting, is that the stock is not split.

Scions of the "Sweet and Sour" Apple.—We received from Mr. Wm. T. Hamilton, Clifton Park, N. Y., a parcel of scions from a tree which produces this kind of apple. The same gentleman also sent us samples from the same tree, last fall, which were tasted by many, and the strange peculiarity acknowledged by all. Mr. H. states that forty years ago, two scions were brought to that place from Horse-Neck. The theory of the origin of the variety, which is only *traditional*, as we understand, is that which has been often given, of a union of two scions of opposite kinds. "For several years," (says Mr. H.) "the fruit from these scions was almost entirely sweet; then a small spot on one side, of greener color, and sour as a greening, showed itself. The tree is still living and *now bears greenings only*. It has some years produced 20 bushels, though they are less sour, and more pleasant than the ordinary greenings. The tree from which those I gave you were taken, produces greenings also, and the two varieties are found growing side by side, on the same twig."

Improved harness-buckle.—One of the most valuable improvements which we have met with for some time, is the "*Compound Lever Buckle*," invented by Henry Lawrence, of Chenango county, N. Y. The article is intended chiefly for the use of the trace or tug in harnesses, and is equally applicable to the heaviest or lightest draft. Its peculiar advantages are, that it dispenses with the use of the tongue, thus obviating the necessity of cutting holes in the trace, and giving to it greater strength and durability. Every one has noticed that a trace breaks first where the tongue of the buckle goes through; this is owing to the whole strain of the draft coming on but a small portion of the trace, and to the leather becoming rotten and weakened by the holes letting in wet. With this buckle, the trace can be taken up or altered to any required position, and is instantly fastened with the utmost exactness, to a hair's breadth. It is an article of great simplicity, neatness and durability, and we have no doubt is destined to come into general use. The patentee has left one of these buckles at this office, where it may be seen by those interested in such improvements.

☞ The beautiful and high bred Durham bull "Marius," shown at Poughkeepsie, by Mr. Oliver of Sing-Sing, has, we learn, been purchased by Messrs. Bell and Morris of Morrisania, Westchester county, N. Y.

Harvesting Machine.—We have received from Zerah M. Chapman, of Illinois, a sketch of a harvesting machine invented by him. He must excuse us for not giving a cut of it, as it is impossible to get, from the draft sent, such an idea of its construction as is necessary to make a proper drawing and description.

Guano.—We make the following extract from a letter received from Edward Stabler, Esq. of Sandy Spring, Maryland:—"Why do none of your correspondents communicate on the subject of guano? I have used it to considerable extent on my wheat crop, sown last fall; the present appearance of the crop is most promising indeed. Mine was the Peruvian guano, Orpheus' cargo, imported into Baltimore by S. K. George, Esq. With two hundred pounds to the acre, side by side, of 25 ox-cart loads, (about 30 bushels to the load,) of barn yard manure, there is a difference of 50 per cent in favor of the guanoed wheat. Nearly half of the field has 12 bushels of ground bones to the acre; but the difference in favor of the guano, is about the same as over the manure. If the guano only proves durable in its fertilizing effects, it is by far the cheapest and most valuable article I have used as a manure. I intend using about a ton on my corn crop this season."

Sanford's Straw Cutter.—In the Dec. number of our last volume, we gave a cut and description of this machine. We have lately witnessed its operation, and think it a good implement for cutting hay or straw. It cuts in lengths of about three-fourths of an inch, and with ease and rapidity. The price is $15.

Advertisements.—A variety of information of public interest will be found in our advertising department this month. The breeders of Short Horns will perceive that Mr. Allen proposes to delay the publication of his Herd Book, so as to give them an opportunity to insert their calves of this year.—Those having business to transact at Washington City, or wishing to emigrate to the South, are referred to the notice of Messrs. Skinner & O'Reilly.—Those wishing to purchase Short Horns, to the advertisements of Mr. Prentice and Mr. Vail, and those who wish to enter into the grazing and wool-growing business on a large scale, to the notice "To Sportsmen."

Duties of committees for Ag. Societies.—Among the regulations of the Franklin county (Vt.) Agricultural Society, we notice the following article, to which we would call the attention of our readers. It strikes us as a very proper regulation: "It shall be the duty of such committees as shall be appointed to inspect agricultural productions—in making their reports on the same, to take into consideration the skill, industry and economy, with which the same was produced, and accurately note and specify the individual merits and demerits of the principal animals and articles inspected by them, and clearly describe the points in which the preferred animal or article surpasses the others."

Improvement of Horses.—We invite attention to the advertisement of Gen. Salisbury's horse *Diomede*, in this number. We thought highly of this animal when we saw him at the State Show last fall, and our opinion seems to have corresponded with that of a committee of acknowledged good judgment, which awarded to him the first premium on horses. We have no doubt he is well calculated to produce a stock of the highest value for the purposes mentioned by Gen. Salisbury. It will be seen that accommodations are offered to mares sent from a distance.

ANSWERS TO INQUIRIES.

T. P. E.—You can obtain the first series of "The Cultivator," 10 vols., handsomely bound—also the first vol. of the new series, of Wm. Kean, bookseller, New-Orleans, who keeps them constantly on hand.

M. V. B.—For drawing and description, from which any carpenter can make a good Roller, see Cultivator for 1843, p. 59.

Dorkings.—F. C. and P. C.—Do not know of any in the vicinity you speak of. We believe they may be had of Mr. H. T. Chapman or Dr. Field, New-York, at $3 per pair.

Gapes in Chickens.—T. G., (Springfield, La.)—See last vol. Cultivator, page 305.

Osage Orange.—"*A Delawarian*"—The most ready way of propagating this shrub, is by *cuttings*, which are advertised for sale by Messrs. Landreth and Fulton, Philadelphia. Price $10 per 1,000. (See advertisement in March No. of the Cultivator.)

Transplanting the Sugar Maple.—The best time is either in the fall, just after the leaves have fallen, or as early in spring as the ground can be worked. See an article in last Cultivator.

Foot Rot.—N. P. A. (Wheeling, Va.)—If sheep having this disease, are kept in a small space, the ground, particularly if it be wet, is believed to become so infected with the virus, that other sheep may take the contagion by coming into the enclosure. The same sheep might also re-take the disease, unless the remedy used counteracted this influence in the ground till it might be dissipated by the air. To make sure, however, we should prefer removing the sheep to a perfectly clean lot, after having applied the remedy, and would not let any go on the infected ground for some time.

Refuse of Flax Mills.—P. B., (Homer, N. Y.)—This substance is not worth your attention as long as you can obtain stable manure at the price you mention—that is, 12½ to 25 cts. per load. The flax refuse rots slowly—on this account we have seen it put round fruit trees to keep the grass from growing, and for this purpose is useful.

Fistula, (not "thistelo.")—D. G. (Quaker Springs, N. Y.)—If the sore is so far advanced that matter is discharged, Mr. Youatt directs, (Treatise on the Horse, p. 153, 168,) to insert a seton so that the whole of the matter may run out, and continue to run out as fast as it is formed. He says, "the needle should enter at the top of the tumor, penetrate through its bottom and be brought out below the abscess." Some recommend cleansing the sore after the insertion of the seton, with vitriolic solutions, but frequent fomentations with warm soap-suds, will probably answer, and as Mr. Youatt says, in the earlier stages of the abscess, will effect a cure.

Whale Oil.—E. B. B., (Mystic, Ct.)—There is no doubt that the oil and "filth" from whale ships would make good manure, if properly managed. A gentleman in this neighborhood, has used the blubber of *seals* to good advantage as manure. His mode of using it, which would probably do well also for whale oil, is to mix it largely with loam or street manure, and let it lie till a pretty thorough decomposition has taken place in the mass. It is recorded that the late Lord Somerville used whale oil at his farm in Surrey. It was mixed with sandy earth, and afterwards applied to crops, and is said to have produced great results. All animal oils are very powerful in their effect on vegetation, and it hence becomes necessary that they should be so incorporated with other substances that they reach the plant in very small quantities only.

SAW-DUST—SWAMP-MUCK—OLD COAL-PIT BOTTOMS—LEACHED ASHES, &c.—J. A. B. (B. M. House, Md.)—Saw-dust is useful in breaking up the tenacity of clay soils. It may be spread and plowed in. When it has thoroughly decomposed, it appears to afford some food to plants. That made from hard wood, is thought best—though *oak* saw-dust sometimes contains considerable acid, and ashes, or lime, are recommended to be mixed with it on this account before it is used as manure. It makes good bedding for horses and cattle—absorbs the urine, and keeps the animals clean. *Swamp-muck* varies much in quality, but is generally more or less valuable for uplands. You had better try it. Put some on your wheat and rye lands next fall, and harrow in. Expose some of it to frosts next winter, and in spring put it on your corn land. Note the result in all cases—it may be its effects will be better the second year—it often is so. You may find out in this way, whether it is best for you to use it to any extent. The *bottoms of coal-pits* are useful to mix with stable manures, and to absorb urine—it prevents, to a considerable extent, the escape of ammonia, and it is a good top-dressing for moist grass lands. The effects of leached ashes, lime, plaster, and bones, on your soil, can best be determined by experiment. They may be tried on a small scale, so as not to run much risk, but with such care that the result may be taken as a guide.

Carrots.—H. B, G., (Newtown, Ct.)—The seed may be sown with a machine. We noticed one in our last, page 106, (Seward's) which we have no doubt may do well. There were formerly machines sold at the ware-houses in Boston at five dollars each, with which carrots, turneps, &c., could be sown better than they generally are by hand. From an acre, to two acres per day, according to the space between the rows, may be sown by one man with a good machine. Before sowing, the seed should be well dried and rubbed between the hands, or in some other way, to take off the burrs and make it so smooth that it will not clog the machine. A light soil is considered preferable. About sixteen inches is considered the proper distance between the rows, and they are commonly thinned to two inches in the row. If the ground is quite moist, the seed is sometimes sown on ridges, made by turning two furrows together by the plow. Two rows at the distance of three inches or so, are sometimes sown on a ridge, to make up for the greater space which this mode allows between the alternate rows. The practice of sowing two rows together, as described, is sometimes, also, adopted in level cultivation, in order to give opportunity for the use of the harrow or cultivator, in working the crop. We have been informed that the seed is sometimes sown broadcast, and that very large crops have been obtained by this mode. The argument in favor of it is, that as the carrot makes but a small top, the roots will bear to stand very close, so as almost to cover the ground, and this can be effected more completely by the broad-cast, than by the drill mode. From experience we know nothing of the broad-cast mode—it appears probable it might have advantages over the others on soils not subject to weeds, but where these prevail the additional labor required to clean the crop, might overbalance the extra yield.

MR. PRENTICE'S SALE OF SHORT HORNS.

We very cheerfully give place to the following communication, which has been sent us by one of the best judges and most distinguished breeders of cattle in our country, and one who can have no other interest in the sale than that which should actuate every individual who desires to promote the best interests of the farming community. We doubted very much the propriety of the step taken by Mr. P. in offering his whole stock at public sale, without reservation, because such sales heretofore have generally failed to excite that attention which they deserved, and because we feared he would not in this way realize any thing like fair prices for his valuable herd. Mr. Prentice has, however, offered such inducements for an attendance at his sale, as have never before been offered, by pledging himself that his cattle shall be actually sold to the highest bidder, without any bye-bidding or reserve. That they will therefore be sold, and at such prices as the public are pleased to give, is a matter of certainty; and we should hope that this assurance would inspire sufficient confidence to induce such an attendance at the sale as will prevent their being struck off at half their value. A list of the animals to be offered, together with their pedigrees, will be found in the advertising department of this paper.

Mr. Tucker—I observe in the last Cultivator, that Mr. Prentice of your city, has advertised his numerous herd of cattle for sale. The entire frankness and absence of all reservation whatever, with which they are offered, is not only characteristic of the man, but is a sufficient guarantee to the public that a competition will here be offered greater than ever before on this side the Atlantic, to possess some of the choicest specimens of this noble race of cattle.

This step of Mr. P. at this time, has probably been maturely considered, and his reasons for thus offering them, are no doubt a sufficient justification for the *boldness* of thus inviting a public sale, when the spirit of improving our native herds has so long slumbered, and a renewed energy is hardly yet awakened in our agricultural community. Still, it is to be hoped that public attention will be aroused by this decisive measure, and that our practical farmers, stock breeders, and retired country gentlemen, will avail themselves of an opportunity such as has never yet occurred, in the number and quality of animals offered, to renovate and improve the neat stock of their estates.

After an experience of near thirty years that the Short Horns have been bred in the United States, it has been too well settled by an intelligent public opinion, that they are, individually in themselves, and as improved by the infusion of their blood with our native stock, an invaluable acquisition to our country, to be now denied. It would therefore be the height of mortification that one who has made unwearied efforts, both in time and in expense, and with motives far above all pecuniary considerations, should be left unremunerated, in part, at least, for his invaluable services.

It now remains to be seen whether a discriminating public will recognize such efforts, by attending this sale, and purchasing the animals offered at any thing like fair prices, or by a culpable listlessness and want of true self interest, permit, in their sacrifice, a public disgrace. Were this herd of cattle in England, they would undoubtedly bring twice the sum at public sale, that their proprietor would ask for them at private contract, if he were now at liberty to do so; and to such gentlemen as propose to send to England direct for fine animals, at enormous prices, as is almost every year the case, and then obtain those of no better quality, and perhaps inferior to those now offered, this presents an opportunity of which they should wisely avail themselves.

To breeders, this sale is of vital interest. It must, for a time, at least, fix the *selling* value of American Short Horns. The number and the quality of this herd, and the prices they will bring, are far too prominent to be overlooked or forgotten, by the subsequent purchasers for some time to come; and although the writer of this is a breeder to a moderate extent himself, yet having not the remotest pecuniary interest in this herd, or in the result of the sale, he has a deep feeling that the integrity and high character which this noble breed of cattle possess in the estimation of our most intelligent farmers, shall be sustained by prices that will continue to render them an object of attention for all future time.

Let there then be a rally at this sale, and a *substantial* dispositson evinced to sustain one who has made such important acquisitions to the true welfare of our agriculture as has Mr. Prentice, in the importation and rearing of his beautiful herd of cattle. PUBLIUS.

WHITE-WASHING.

This is the the season of the year for white-washing. There is no doubt that a coating of lime-wash, or some other application, tends greatly to preseve buildings, fences, &c., that are exposed to the weather. The inside of our dwellings, also, is greatly improved in appearance, as well as rendered more conducive to health, by washes of lime. We have in former volumes given various receipts for making white-wash; and would refer our readers to the vol. for 1843, p. 88.

In the Report of the Commissioner of Patents for 1844, we find the following directions for making washes, and which are there recommended with much confidence. The superiority of this wash said to depend upon white vitriol, sometimes called sulphate of zinc, which is represented as a powerful mordant to harden and fix the paint.

For brick or stone.—One barrel of stone lime, (fresh burnt is best,) slake it, and then add two barrels of hydraulic cement or water-lime, stir them together until about the thickness of paint suitable to be laid with a brush; then add twelve pounds of white vitriol, (sulphate of zinc,) stir same for an hour, or till thoroughly mixed; let it remain twenty-four or thirty hours, and it is fit for use. When you commence using it, take for every four gallons, one quart of fine dry sand, and stir them together; put it on the wall with a large paint-brush; if too thick add a little water. This mixture produces a pale yellow ; after which, (when dry,) to produce a pure white, go over the same with white-wash, as follows : one bushel of lime, with one pound of sulphate zinc.

For wood-work.—One bushel lime; one pound white vitriol, (sulphate of zinc;) one quart of salt; one peck of white sand.

Sulphate of zinc can be formed by taking one part sulphuric acid, four parts water, and adding as much zinc as it will take up.

THE STING OF A BEE, it is asserted, owes its poisonous nature to its being an *acid;* and therefore liquor potassia, by neutralizing the acid, becomes one of the best remedies. As it is very caustic, and corrosive to the skin, it must be applied at the precise spot, on the point of a pin or on the tip of a camel's hair pencil.

Notices of New Publications.

FRUITS AND FRUIT TREES.

The Fruits and Fruit Trees of America; or the Culture, Propagation, and Management, in the Garden and Orchard, of Fruit Trees generally; with Descriptions of all the Finest Varieties of Fruit, native or foreign, cultivated in the gardens of this country. Illustrated with numerous Engravings and Outlines of Fruit. By A. J. DOWNING. 1 *vol.* 12 *mo.*, (*and also* 8 *vo.*) *New-York, Wiley & Putnam.*

It is with feelings of more than ordinary gratification, that we announce the appearance of this invaluable work. We are sure that none of our readers will be in the least disappointed with its contents, notwithstanding the high expectations which have been raised by the known abilities of its author. A deliberate examination of a large portion of the work, enables us to say, without hesitation, that it is by far the greatest acquisition placed within the reach of American cultivators of fruit, which has ever yet appeared.

Nearly sixty pages of the first part of the work are devoted to the general principles and practices of fruit culture. The greater part of this is the direct result of the author's own extensive experience, combined with that of the experience of others; and taken as a whole, it is a perspicuous and admirable digest of all that is known on the subject up to the present time. The remainder of the volume is chiefly devoted to the different kinds of fruit, their management, diseases and enemies, and full and accurate descriptions of the numerous varieties, of a large part of which excellent outline figures of the natural size are given.

The pre-occupied state of our pages, prevents our entering upon an analysis of the work at this time; but we shall next month take up the subject and favor our readers with extracts from several portions of the work. The clear and neat style of the author, his extensive and long continued experience, and the unwearied labor which he has bestowed upon the work, have rendered it nearly all that could be desired in the present state of knowledge on the subject. New and repeated additions to the stock must of course be continually made; and in promoting and facilitating these additions, this work must prove a powerful auxiliary.

There are occasionally incidental remarks made, and opinions advanced, with which we do not fully agree, or which may partake of a conjectural character; but they are very few in number, and can scarcely affect the value of the work even in a trifling degree. The amount of matter afforded in a clear and condensed work as this is, of no less than 500 pages, with about two hundred engravings, illustrating the processes of Grafting, Budding, Training, &c. and outline figures of fruits, at the low price of one dollar and fifty cents, should induce every one who cultivates a single cherry tree or currant bush, to possess it at once, and avail himself of the ample instructions and interesting facts with which it abounds.

Report on the Geological and Agricultural Survey of South Carolina, for 1844, *by* M. TUOMEY—pp. 64.

We are indebted to Col. A. G. SUMMER, of Columbia, S. C., for a copy of this work. The Report consists of three general divisions, or chapters, viz: Primary Rocks, Metals, and Economical Geology—to which is added an Appendix embracing the "Prize Report of Experiments, submitted to the State Agricultural Society of South Carolina, Nov. 1844," by FRANCIS S. HOLMES.

We find in this Report, some interesting facts, particularly under the third division, or Economical Geology; we cannot, however, do more for the present than briefly advert to them. Speaking of *Gneiss*, the writer states that it occupies, in a considerable degree, the mountainous portion of the State, and that he

> "Was not a little surprised to find on the very summit of Glassy mountain, and on one of the highest of the Saluda mountains, crops that would have done no discredit to more favored localities. On the most rugged sides of these mountains, particularly in the moist dells, the luxuriance with which the natural grasses grow, show how well

they are adapted to sheep-walks, and it is strange that so little attention has been directed to this branch of agricultural economy."

The writer again remarks, in reference to a hilly region in the county of Pickens, the soil of which is considerably derived from *Mica slate*, that the hills were covered with verdure, when he saw them, while a few miles lower down, the contrast was striking, every thing being parched by drouth, and that "it was impossible to keep the fancy from picturing these beautiful hills covered with clover, and alive with a thousand flocks and herds—for there is lime in their very midst. Both the climate, and the geological character of this region, mark it as the grazing country of the State."

Under the head of the *uses and action of lime*, the writer observes—

> "A knowledge of the action of lime on vegetable matter, ought to prevent the mistakes committed in putting it in contact with the roots of plant, the delicate fibres of which it must attack, if there be not a superabundance of other vegetable matter in the soil. As lime acts chiefly by bringing into action ingredients that were inert in the soil, and as every crop carries off a certain quantity of soda, potash, phosphoric acid, &c., it follows that unless these be added, in the various forms of manures in which they exist, that a soil may be unproductive, though having lime in abundance. I now speak of lime, not marl, for in marling, many other substances are added as with lime."

The Appendix relates chiefly to experiments with marl, on various crops. The action of this substance is shown to be highly beneficial, and from the quantities in certain portions of the State, no doubt is entertained that it furnishes a source of fertility to the soil, the value of which is incalculable.

We give the result of an experiment of the marl on corn. Its effects on cotton and potatoes were similar:

Half an acre, without marl or manure, produced 8½ barrels ears of corn—with eight cart-loads compost in 1843, 10½ do.—with 6½ bushels marl, broad cast, 11¼ barrels.

Report of the Hon. H. L. Ellsworth, *Commissioner of Patents, showing the operations of the Patent Office, during the year* 1844.

We are glad to learn that an edition of this valuable Report, which we noticed in our last number, has been published for sale, by our Agent in New-York, M. H. Newman, bookseller, 199 Broadway. It can also be obtained of Little & Brown, Boston—G. B. Zieber & Co., Philadelphia—Geo. Jones of this city, and we presume of booksellers generally. Price 75 cts.

Lowell Offering.—This publication, supported as it is entirely by the intellectual talent of the female laborers in manufactories, is not only highly creditable to the editors and contributors, but is even a subject of just pride to the country. It exhibits in a striking light the elevated condition and character of this class of our population, when compared with descriptions of the same class in Europe. Though it is truly the "Factory Girls'" Offering, many of the articles would do no discredit to literary writers of acknowledged merit. Edited by Misses Curtis and Farley—published monthly, at one dollar a year.

The Farmer's Library, and Monthly Journal of Agriculture—Messrs. Greeley & McElrath, New-York, have issued a prospectus for publishing a work under this title, for the editorial management of which they have secured the services of John S. Skinner, Esq., the founder and former editor of that pioneer of Agricultural publications in this country, the American Farmer. The plan of the proposed work is as follows: Each number will consist of two distinct parts—I. *The Farmer's Library*, in which will be published continuously, the best standard works on Agriculture, beginning with Stephens' *Book of the Farm*, a recent Scotch publication of high character. This division of the work will embrace 600 pages a year. II. *The Monthly Journal* of Agriculture, which will contain about 50 pages per month, and will comprise, 1. Foreign selections from the higher class of British, French, and German periodicals of Agriculture, with extracts from new books which may not be published in the Library. 2. *American* Editorials, communicated selected accounts of experiments, &c. Each number to be illustrated with numerous engravings. Its price will be *five dollars* a year in advance, for two royal octavo volumes of 600 pages each. We have no doubt it will be a very valuable work, and we cordially recommend it to the patronage of the public.

Useful Works for the People.—Messrs. Greely & McElrath, of New-York, having lost by fire their stock of books, plates, and engravings of their series of "Useful Books for the People," have commenced the publication of a new series, the first in order of which is the work on Astronomy by M. Arago, with additions and corrections by Dr. Lardner. The works of these philosophers are distinguished for combining accurate scientific information, with much that is pleasing and attractive, and on the subject of Astronomy, in particular, their writings are looked upon with great confidence. We venture to say that no opportunity has before been offered to the American public of procuring so large an amount of valuable scientific information at so small an expense. The number, comprising the lectures on Astronomy, contains 96 pages large octavo, small print, with numerous diagrams and illustrations. This publication is to be followed by others of a like useful character—each series being complete in itself—and of a size so uniform that the whole may be bound together. The price of the number on Astronomy, is 25 cents, which will also be the price of each of the series of Useful Books.

Spirit of the Times—A Chronicle of the Turf, Agriculture, Field sports, Literature, and the Stage.—As a sporting chronicle, this publication has long been distinguished and unrivalled. Though we are accustomed to estimate things by an utilitarian scale, we must allow the "Spirit" an eminent character even in this respect. If the old adage of "laugh and be fat," is to be regarded in the light of *cause* and *effect*, there is no knowing how much *fatness* the witty sayings and funny stories there given may have produced, or from how many hypochondriacs the "blues" may have been banished, and the dyspepsia cured! And what labors can be considered more *useful* than those which promote health, and save doctor's fees? This old favorite commences the fifteenth volume with new type and other improvements, which render its appearance even more attractive than ever, and together with the style and character of its contents, cannot fail to recommend it to all seeking any thing in that *line*. It is issued weekly, each number containing twelve large quarto pages, at five dollars per annum. Three or four elegant steel engravings of celebrated horses, are given in the course of a volume, without extra charge to subscribers. Published by John Richards, No. 1, Barclay-street, New-York—Wm. T. Porter, editor.

Mr. Tucker—I am aware you have no "poet's corner" in your strictly *utilitarian* paper, but presuming you are in favor of whatever is designed to elevate the feelings, even though expressed in rhyme, I have ventured to send you the following

HYMN FOR THE SEASON.

Bounteous Father! Lord on high!
Who hear'st the raven's feeble cry,
With thy protecting goodness, rife,
Long-slumb'ring nature wakes to life!

Earth's kings may rear the tow'ring spire,
And feed with gold the altar fire—
Not from the organ's peal alone,
Anthems arise before thy throne.

Those holier temples, large and wide,
The glen, the grove, the mountain-side,
Resound with choral songs of praise
To that blest Pow'r who tunes their lays.

Each bud and flow'ret, leaf and tree,
Breathes orisons, O God! to thee,
Whence emanates unchanging love,
Embracing all, around, above.

Revolving seasons now have brought
Sweet Spring with cheering beauty fraught—
Seed-time again to us is giv'n;
We trust to earth, and hope in Heav'n.

Send thou the late and early rain
To vivify the springing grain—
And when the harvest home we bear,
Let grateful peans fill the air!

M. W. H.

NEW-YORK STATE AGRICULTURAL SOCIETY.

At a meeting of the Executive Committee of the N. Y. S. Agricultural Society, held at their room on the 17th April, the President in the chair, there were present, Messrs. Prentice, M'Intyre, Enos, Vail, L. Tucker, Nott, Cheever, Emmons, Howard, and Sotham.

The President presented a letter from Col. A. G. Summer, Esq. of Columbia, S. C., expressing his warm interest in the objects of the Society, and informing the President that he had been directed by the State Ag. Society of South Carolina, to forward to our Society, the Reports of the Geological Survey of that State, together with several documents emanating from that Society.

A letter from L. F. Allen, Esq. having been read, in relation to the Premiums on Horses, it was resolved that the following *additional* prizes be offered:

Best "blood"	stallion,	4 years old,......	$20.
Second best,	do.	do.	10.
Best "Draught"	stallion,	do.	20.
Second best,	do.	do.	10.

Additions were also made to the prizes for Fat Cattle, by adding a class for fat cows and heifers, separate from oxen or steers—First, $10—Second, $5—Third, vol. Transactions.

L. A. Morrell, Esq. of Tompkins county, was present, and presented the copy of his "American Shepherd," in manuscript, most of which was examined by the Committee, and a resolution was unanimously adopted, highly approving of the work, which is soon to be published.

The following letter, with the accompanying package of seeds, was presented by the President:

"*New-York, April* 17, 1845.

"Sir—The accompanying parcel of seeds was handed to me, in Washington city by Gov. Marcy, with a request that I would transmit it to the State Agricultural Society of New-York.

"It contains a portion of a package of seeds received at the War Department, for distribution, from the Commissioner of the Patent Office.

"May I ask that the proper officer of your society will acknowledge the receipt of the parcel to the Secretary of War at Washington.

"Very respectfully, I have the honor to be your ob't servant. Prosper M. Wetmore."

The thanks of the Society were voted to Hon. Wm. L. Marcy, Secretary of War, for the package of seeds, which were distributed among the members.

A letter having been received from Francis Rotch, Esq. now in London, together with dies ordered by the Society for Medals, executed by Mr. Taylor, a distinguished artist of Birmingham, after subjects and designs by Mr. Rotch, the following resolutions were unanimously adopted:

Resolved, That the thanks of the Society be tendered to Mr. Rotch for his attention to the request of the Society; and the Executive Committee take great pleasure in expressing their unqualified approval of the designs prepared by him for the medals, which, in their estimation, are peculiarly appropriate.

Resolved, That Mr. Rotch be desired to present to Mr. Taylor, the thanks of the Society for the superior manner in which the dies have been executed, and which reflect the highest credit upon him as a Medallist.

A circular addressed by the Cor. Secretary to the County Cor. Committees, was read and approved, and ordered printed.

County Ag. Societies.—We are glad to see that quite a number of the County Societies of this State, have already issued their Prize Lists for the coming autumn shows. We have received the Prize Lists from *Queens*, to be awarded in October—*Rensselaer*, show to be at Troy, Sept. 24, 25—*Orange*, to be held at Goshen, Oct. 8, 9; all the premiums to be paid in silver spoons—*Livingston*, to be held at Geneseo, Oct. 2—*Ontario*, to be held at Canandaigua, Oct. 14, 15; among the premiums are 20 copies of "The Cultivator"—*Clinton*, to be held at Plattsburgh, Sept. 16, 17.

AGRICULTURE OF SOUTH CAROLINA.

Mr. Roper's Address.—The author will please receive our thanks for a copy of the address, delivered before the State Agricultural Society of South Carolina, Nov. 28, 1844. It is a well written document; and contains much valuable statistical information. The writer endeavors, in a very earnest and striking manner, to induce the people of his State to adopt some course of operations by which they may relieve themselves from their present burdens. He shows that they (as a State,) now spend more than they make, "and consequently the State languishes under an incubus, which will require a strong moral force, independent of activity and industry, to remove." He says—"we allow the negroes to become an expense of more than two and a half millions of dollars for clothing, corn, bacon and tobacco, and their plantation implements." Mr. Roper shows the necessity of diversifying the objects of industry. The production of cotton in South Carolina, cannot be depended on as a source of profit. In relation to this article, he says, "though it was once our wealth and pride, it can continue so no longer; a fairer bloom opens on other lands, and every day imparts a more ominous warning that the sceptre has departed." He regards it as "pernicious that so pervading a propensity exists to investments in lands and negroes, to grow rice and cotton."

The remedy for this state of things, the adoption of which Mr. Roper urges, is the introduction of a more varied system of agriculture, by which the sums now sent out of the State for beef, pork, bread-stuffs, butter, cheese, &c., shall be saved at home; and also the introduction of *manufactures*, several successful examples of which, existing in that State, he brings forward. Of the influence which manufacturing establishments have exercised, so far as they have been tried in South Carolina, he thus speaks: "The effect of this diversity of labor, has been to extend competence among the neighboring people, to *improve their morals*, intelligence and education, and establish a *more respectable order of society*."

BONES AND FISH FOR MANURE.

We have recived from Mr. Wm. Makinster, an Address delivered before the Middlesex (Ct.) Ag. Soc., by E. A. Elliott, Esq. In this address, Mr. E. speaks of the effects of *bones* and of *fish* as manure. He states that bone-dust has been applied in his neighborhood with good results, to corn, rye, ruta baga, and other crops. An application of twenty bushels per acre to a portion of a rye-field, produced a difference of nearly one-half in the yield, the field being alike in other respects.

In the neighborhood of Mr. E.'s residence, large quantities of "white fish" are taken, and frequently used as manure. This application of fish was commenced, he says, in that neighborhood, about the year 1790. The effects were great—"barren plains, which had been long unproductive, were converted into the most fruitful fields. Their beneficial effects were manifest upon all soils, and for a number of years; while they were taken in large quantities, they were relied upon for the rye, corn, and particularly the potatoe and turnep crops, to the exclusion of almost all other kinds of manure. It was found, however, that their effect upon a second application, was not as great as upon the first, and still less upon a third, and this led many to doubt their utility as a constant dressing for all kinds of crops, and especially upon sandy soils, without an intervening application of barn yard manure, as they are found to exhaust the vegetable matter of the soil, and leave it in a compact and unproductive state. Their effect has continued to be great upon strong rocky loam and clay or moist lands; upon such lands they produce as large crops as can be found in the fertile regions of our western country. Their effect is visible on sandy soils for two or three years, and longer upon loam and clay. The usual mode of applying them, is to spread them, and after a few days harrow and plow them in with a light furrow. Some persons stack them with yard manure, or earth and turf, and think their effect sufficiently increased to compensate for the extra labor of stacking and carting out."

STEEPING SEEDS.

For the purpose of stimulating the growth of plants, various solutions have been employed for steeping the seeds. The substances thus employed have been nitrate of soda, nitrate of potash, or salt-petre, muriate of ammonia, sulphate of ammonia, &c., &c. Salt-petre has long been used, in some form, as a fertilizer, and nitrate of soda has within a few years been recommended as a substitute, in some respects preferable. So far as we have learned, however, the effect of nitrate of soda appears to be rather to produce *vegetable fibre* or straw, than grain or seed; and hence it has latterly given place to muriate of ammonia in the preparation of solutions. Many experiments which have been made in Europe, show that wheat, barley, oats, peas, and beans, have been considerably increased in yield by the seed having been soaked in solutions of the last named substance. The trials which have been made in this country, have as yet been comparatively few, though some results which were made known by experiments last year, have indicated an important benefit from the application of the article to Indian corn.

One of the best examples which occurs to us of the benefits derived from the muriate of ammonia, is furnished by the experiments of Dr. S. Webber of Charlestown, N. H., reported in the N. E. Farmer. Dr. W. used a solution for soaking corn as follows: He dissolved a small piece of the muriate of ammonia, estimated at four or five grains, in about half a coffee cup of water, and threw into the solution a handful of corn, which, after having remained four or five hours, was planted. He planted this soaked corn in hills, side by side with that which was not soaked. In four different cases which are reported, the soaked seed produced much the largest yield—generally full one third more. The land was light and dry, and for several of the experiments, the poorest spots were purposely taken. The corn suffered from drouth, but in all cases that from the soaked seed manifested a decided superiority, and frequently attracted the attention of strangers who knew nothing of the cause.

Ammoniacal liquor, which is produced by the distillation of coal in the manufacture of gas, is thought to be a valuable manure. Mr. Hannam, in his Essay on Waste Manures, describes this liquid as being "an impure solution of the carbonate of ammonia, and is the very gas which is evolved during the decomposition of animal substances, and which escapes from our manure-heaps during fermentation. "It is," (he continues,) "highly necessary to vegetation—the plant extracting the carbon of its structure from the carbonic acid, and its nitrogen from the ammonia of the carbonate of ammonia. The gas liquor holds in solution acetate, sulphate, or muriate, as well as carbonate of ammonia; in all of which states it is fitted to promote the growth of plants. The general average of its ammonia, in one or other of these forms of combination, according to Professor Johnston, is from twenty to forty pounds per one hundred gallons."

Judge Koon of this city made some trials with the ammoniacal liquid last season. He informs us that its effects were in all cases highly beneficial. Corn and oats soaked in the liquid for thirty hours before planting, showed a broader and greener leaf, produced larger heads and ears, and yielded, he thinks, at least twenty per cent more than that without the liquid—the treatment being in all other respects, similar.

Mr. Campbell, of Scotland, has become distinguished for the preparations of steeps for seed grain, which in some cases appear to produce remarkable effects. The salts he uses are sulphate, nitrate, and muriate of ammonia; nitrates of soda and potash, and combinations of these. Mr. Colman gives, in the second part of his European Agriculture, a letter from Mr. Campbell, in reference to the advantage of using these steeps. He mentions the following experiments in illustration of the comparative productiveness of prepared and unprepared seed. Some seed-wheat, soaked in nitrate of ammonia, was sown on the 5th of July, which, by the 10th of August, he says, presented the following results: "The prepared seeds had tillered into *nine, ten,* and *eleven* stems; the unprepared into only *two, three,* and *four;* and both were from the same sample of seed, and sown in the same soil, side by side. The time of steeping varied from fifty to ninety-four hours, at a temperature of about 60 degrees Fahrenheit." The yield of *grain* from these plants, was not known at the time Mr. Colman sent the account for publication, but we may expect to hear further particulars hereafter.

A year ago, a pamphlet was published by a German chemist named Bickes, in which it was declared that seeds may be so treated as to render unnecessary any manuring of the soil in which they are to be sown, and that even from the most barren sands, luxuriant crops may be gathered. Indeed the wonderful virtue of this newly discovered process seemed hardly less, from the representations given, than were formerly attributed to the "philosopher's stone." It can, however, serve but little purpose to occupy space, or spend time in reading the accounts of this supposed discovery, as the author only imparts a knowledge of its nature and constituents to such as *pay for it.* Professor Johnston, in a notice of the pamphlet of M. Bickes, in the Edinburgh Quarterly Journal of Agriculture, observes that—"He is one of that class of discoverers who wish to sell their secrets, and by magnifying their importance, hope to derive a larger profit by divulging them. With such men the true friends of agriculture can have no sympathy."

As a steep for Indian corn, we should prefer muriate of ammonia, which we would use in the following manner: An ounce of the article, (costing two cents,) is deemed sufficient for a quart of corn. It should be dissolved in a sufficient quantity of water to fairly cover the seed, which may remain in the solution twenty-four hours, in a temperature of sixty to seventy degrees. In order to demonstrate as clearly as possible the effects of the solution, the trial should be conducted with the strictest care and precision. We can think of no better mode than to plant alternately two rows with seed from the solution, and the same number with seed without any preparation—extending the experiment to ten, twelve, or more rows of each—the soil and the management to be as nearly equal as possible over the whole. Let the product of the rows to which the solution was applied, as well as the other rows, be carefully weighed and compared, and the result will indicate the value of the solution to the crop.

Solutions, and the application of various substances to seeds, for the purpose of preventing the attacks of insects, have been recommended and used. The success of most of the experiments of this kind, seems rather doubtful. So far as relates to insects which feed on the *blade* only, we have never witnessed the least effect from applications of any kind to the seed, though we have seen many substances used. The most formidable enemy to grain crops in the early stages of growth, is the wire-worm, (a species of *Elater.*) This worm bores into the seed, eats out its substance, and frequently destroys the plant by eating off the radicle as soon as it protrudes from the kernel. The attempt has been made to apply some substance to the seed which would render it disagreeable to the worm. It has been soaked in solutions of sulphate of iron, (copperas,) &c., and coated with compositions of tar and arsenic. To us, it seems not unreasonable to suppose that these substances would tend to make the kernel unpalatable food for the worm, though it seems generally admitted that the tar is not favorable to the growth of the plant. The substances used to prevent the attack of worms, are likewise used to prevent the grain from being pulled up by birds and squirrels. Those who have tried them, state that after a few plants have been pulled up, the birds, finding the kernel in an uneatable state, abandon the attempt to find food in that way.

As regards the prevention of the wire-worm, however, other means have been recommended, which in some instances at least, seem to have had the desired effect. It has been noticed that the wire-worm will feed on pieces of corn-cobs, and this has led to the practice of dropping pieces of cobs with the corn. The worms burrow into the cobs instead of the corn. We have seen instances where this remedy succeeded to considerable extent, as was ascertained by digging up the pieces of cobs put in the corn-hill—the cobs being found, with the worms feeding on them. Pieces of potatoes have sometimes been used instead of cobs, and are said to answer quite as good a purpose.

The remedies above mentioned, are sometimes recommended as being also effectual against the ravages of the "white worm," or "white grub,"—*Melolontha vulgaris.* It may be proper to remark that the habits of this insect and its modes of feeding, are such that none of the means alluded to, would in the least obviate its attacks. It does not eat the seed itself, but generally commences feeding on the roots at some distance from the seed or center, and thus cuts off from the plant its supply of nourishment.

IMPROVEMENT IN SCHOOLS.

Mr. Josiah Holbrook has recently visited this city, in behalf of the Public Schools of New-York, for the purpose of exhibiting to the members of the Legislature and others interested in the cause of education, some specimens of the results of improvements introduced into those schools, and of explaining the methods of instruction which he has so long advocated. Mr. H. maintains that a system of instruction should be introduced which will attract the attention and interest and call into action the minds of the children, instead of the mechanical course now pursued. Instead of confining the child to the irksome and monotonous employment of learning the ridiculous and unmeaning tables of syllables and words which occupy so large a portion of our "spelling books," he would at once present to the child an object which should awaken its attention and excite its curiosity, and thus learn it the names and uses of things even before it understands the formation of words, thus learning the *use* of language before it is compelled to learn by rote its construction. For the accomplishment of this object, he has prepared a variety of school apparatus, which has been introduced in many schools to very great advantage. In learning children to write, instead of the old system of setting them to make marks, he presents them with a definite object to accomplish, by directing them to draw some object—a square for instance. The child's ambition is at once excited, and those who have not noticed the attraction which such pursuits afford children, will be surprised at the avidity with which they will follow them. As the child's mind is developed, he presents it with the objects before him, explaining the names and uses of *things*, and from these, proceeds to the works of God—and sets forth the great principles which govern all the works of creation, which are open to the vision of the child, leaving the minuter divisions and rules to be learned as the child himself feels the necessity for them, when they will be sought for, instead of having to be pressed upon them. Thus the *mind* is constantly brought into activity—habits of thought and observation are induced, and the child led on by its own desires for farther acquirements, only needs the direction and kindly influence of the parent or teacher, to induce it to go on from step to step in the pursuit of that knowledge which is to prepare him for happiness and usefulness.

Several meetings have been held at the Assembly Chamber, on the subject, at the last of which, a committee, consisting of the Secretary of State, the State deputy superintendent of common schools, the chairman of the Assembly's education committee, and others, was appointed to take into consideration this great subject, who have prepared a report (published in the Dist. School Journal for this month,) expressing their entire approbation of the views and plans presented for their consideration. Of the efficiency and excellence of this system, which can hardly fail to receive the approbation of those who will give it a careful and unprejudiced examination, we can speak from several years experience in our own family, and can state that while it adds greatly to the improvement, obedience and happiness of children, it very greatly diminishes the expense of their early education; and while it furnishes a source of never-failing happiness to children when young, it fixes in them such a habit and love for improvement and industry as to secure their future progress in improving and useful pursuits.

FOREIGN ITEMS.

Our English papers speak of the weather during the month of March having been uncommonly cold. From the 1st to the 21st, snow fell daily in many parts of the kingdom accompanied by piercingly cold easterly winds. The ground was generally so much frozen as to prevent its being plowed. Great fears had been entertained respecting the condition of the wheat crop, but on the frost breaking up it appeared that but little injury had been done, and our latest accounts say that the prospects of the farmer in regard to crops, are cheering.

The provisions of the British tariff in regard to the admission of foreign live stock, are much complained of, and it is said that the exertions making on the continent for the supply of the English markets, are operating to the decided injury of the English farmer.

It is stated that one nineteenth part of the whole consumption of bread-stuffs in the kingdom was last year imported from Canada, and the exclamation is added—"*what wonderful crops these Canadians must have had, to* spare so much for the mother country?" The low prices of produce are said to have thrown many English laborers out of employment, and in some neighborhoods public meetings had been called to consider measures of relief.

Loss of Manure in Towns.—The Ag. Gazette remarks, "every shower of rain washes much valuable manure down our public sewers and drains, and thence into the rivers and sea; and thus while we employ ships in fetching guano some thousands of miles to enrich this country, we will not pick up that which lies under our feet. The streets are swept indeed, but little more than gravel, sand and litter is saved; the finest and richest parts are taken away by the rain. There would be no difficulty in forming reservoirs into which all this might flow, and from which it might be transferred to enrich the ground." But the facts, showing the influence of good drainage and cleansing of streets, on the health of towns, are very striking. In the best streets in Preston, the number of deaths above five years of age, were about double those under five; in the moderately drained streets about equal; but in the "ill-conditioned" parts of the town, the deaths under five were two-and-a-half times as numerous as those above. That is, five times as many children die under five in proportion to those older, than in the cleanly streets; the death of older persons with whom they are compared, being also much more numerous in the bad streets, which renders the disparity still more appalling.

Depth of Roots.—In light subsoils, the roots of trees have been found at a depth of 10 or 12 feet—roots of the Canada thistle have been traced 6 or 7 feet below the surface. Wheat, in a rich mellow soil, will strike roots 3 feet downwards, and much further horizontally. The roots of oats have been discovered 18 inches from the stem, and the long thread-like roots of grass, still further. The fine roots of the onion, being white, and easily traced in black soil, have in trenched soil been followed two feet deep. The importance of a mellow soil for these fine roots to penetrate, is obvious.

Killing Rats.—The following poisonous mixture was recommended by Humphrey Davy, as being cheap and tasteless, odorless and impalpable, and hence may be put with any substance which rats devour, without exciting their suspicion. It is merely a mixture of carbonate of barytes, with eight or ten times its weight of grease. It produces great thirst, and death immediately after drinking, thus preventing the animals going back to their holes. To prevent accidents to dogs, cats and poultry, it is spread inside of an iron vessel, hung with wire, bottom upwards, over a beam, just high enough for a rat to pass under easily. The writer says he has proved its efficacy many years.

Turnep Fly.—A correspondent says, that repeated and varied experiments have proved, that half an ounce of sulphur mixed with a pound of turnep seed, will completely prevent the ravages of the fly. [? ?]

YELLOWS IN THE PEACH.

We have received an extended communication from "I. M. B." on this subject, consisting chiefly of suggestions, and not of the results of experiments, and which the crowded state of our columns precludes publishing at length.

Our correspondent calls attention to the difference of culture given to the peach in this country and in England, and speaks of the superior management in the latter country, by selection of soil, situation, and stock; and by pruning, training, and thinning the leaves, flowers, and fruit, and where the *yellows* is unknown.

He next proceeds to show, by the composition of the peach tree and its products, that a large share of nitrogen is required in its growth. "One of the distinguishing products of the seeds and leaves, and doubtless necessary to the existence of the peach, is Prussic or Hydroganic acid, a highly nitrogenized substance. The constituents of this acid are as follows:—

Cyanogen, (by weight,)	1.8054
Hydrogen, "	0.0694

Cyanogen is constituted as follows :—

Nitrogen, (by weight,)	29.652
Carbon, "	25.418

"Although nitrogen is an abundant constituent of the atmosphere, it is not in a form well adapted for the food of plants, and yet in a form that can be so used, it is of the utmost importance. The proportion to be sure, is small, but if it fail it must be replaced by artificial means. If we look at the economy of the peach, it will be observed, that probably, double the quantity of nitrogen will be required to sustain it in a healthy and vigorous state, than that of wheat, which we hnow cannot be successfully raised many years on the same field, without an artificial supply of this kind of food. If wheat can exhaust the natural fertility of the soil in eight or ten years, it is not unreasonable to suppose that the peach will do it in less time. If we consider one moment we shall satisfy ourselves that the necessary principle is naturally returned to the peach orchard in very limited quantities; the seeds being carried off entirely, and nearly all the leaves being scattered by the winds, out of the reach of the roots. As one of the universal laws of nature is the propagation of the species, even at the expense of the vitality of the individual; so when this elementary food becomes exhausted in the soil, the seed draws so heavily upon the resources of the root, bark, and leaves, that they become bankrupt of this fructifying principle, and of course, if there is no further supply to be obtained from the soil, the tree must necessarily perish. When we see then what large quantities of highly nitrogenized *materiel* the healthy functions of the peach require, can we wonder that when the resources fail, the tree should take the "*yellows*," and die?"

We make this quotation from the remarks of our correspondent, with the view of inviting attention to the comparatively short life of the peach tree when not affected by disease, which may possibly be influenced in part by the nature of the food it requires. The pear is known to grow and flourish for centuries; we have never known a peach tree older than 50 or 60 years; a knowledge of the difference in chemical composition might throw some light on the subject. But that the exhaustion of the soil is the cause of the *yellows*, seems to be conclusively disproved by numerous facts. Some of these are stated in the excellent article of N. Darling, in the second number of the Cultivator, to which our correspondent alludes. Numerous others might be mentioned. We have known young and vigorous trees, growing on the strongest and richest wheat lands of Cayuga county, which had never been occupied before by any fruit trees, take the disease and die. And on the other hand, throughout the western part of the State, where the yellows have never yet extended, (with the exception of two or three limited patches, infected from abroad,) we have known trees, growing under all circumstances, on rich and on poor land, on clay and on sand, in new and in worn soil, the trees thrifty and stunted, all perfectly free from the yellows; and in all cases where we have witnessed it, it has evidently been brought from a distance by the importations of trees, or communicated by infection from them. Exhaustion by crops of fruit cannot cause it, for we could cite many cases in trees which never bore; and on the other hand, we have known trees which continued to bear for more than forty years which continued healthy and vigorous.

We may be asked, in what way is the disease communicated, above spoken of. The infection appears to be given in all cases where the bud of a diseased tree is inserted into a healthy stock. Doubtless there would be great danger, in pruning a healthy tree with a knife previously used on a diseased one. It is evidently communicated either by the roots, or by the pollen, perhaps by both; as we have known it to extend from tree to tree from one side of the orchard gradually to the other. A tree which had it one year, was observed to have communicated the disease to the trees standing next to it, but only to the *nearest branches first*, which cannot be accounted for by contact of the roots, as the horizontal pores of the sap vesels would spread the poisonous sap through all the branches during its ascent. The failure of N. Darling, in a single experiment to inoculate artificially by the pollen, only shows that the disease is not thus universally communicated. That infection may result from stones of diseased fruit, seems probable from repeated cases where young imported trees, in perfectly healthy districts, are taken with the malady, and spread it to others. But we must close these remarks, already extended much farther than we intended.

COOKING ASPARAGUS.

We present our thanks to Mrs. N. Darling, of New-Haven, Ct., for the following communication, and would assure her that we shall be greatly obliged for any further contributions she may be pleased to make to our pages. We would also say to all our lady readers, that they would confer a favor on ourselves and the public by furnishing us with communications on any subject pertaining to the duties of Farmer's Wives and Daughters.

"Mr. Editor—Not having seen any recipe for cooking asparagus in the mode which I practice, and having met with very little abroad that to me has seemed fit to eat, I am induced to send you an account of my manner of dressing it for the table.

To be first rate, the stalks should be grown from 4 to 6 inches from the ground, and fresh cut. Wash the stalks clean, and cut them in bits about half an inch long. If the stalks are of different sizes, cut the large ones shorter than the small ones, so as to give them an equal chance to boil and get seasoned. The cook should throw aside the stalk as soon as it begins to cut tough; that is, she is to use only the tender part, unless the asparagus is very scarce, when she can divide the tougher from the tender portions, and put the tougher to boil about ten minutes first. Salt the water in proportion to a table spoonful of salt to two quarts of water, which is sufficient to boil one quart of the pieces in. Have the water boiling when the asparagus is put in, and keep it boiling fast for about half an hour. The best way to know when it is cooked enough, is to take up one or two pieces and taste, for it sometimes cooks quicker than at others, according as it has grown quick or slow. While it is boiling, get ready, say for a quart of the asparagus, 2 slices of bread, cut half an inch thick from a common sized wheat loaf, toasted a light brown, and a large gill of melted butter. When the asparagus is done, take it up with a skimmer, and lay it on a colander or sieve to drain, dip the slices of bread one at a time, first in the hot asparagus liquor, and then in the melted butter. Then put it in the middle of the dish that it is to be served on. When this is done, pour the asparagus over and around the toast, and strew the rest of the butter as evenly over it as possible, when it is ready for the table. If however, the rest of the dinner should not be ready, let the asparagus be kept hot until it is; for if the cook does not serve her asparagus hot, she will lose much of her labor and credit."

"A stitch in time saves nine." In killing weeds, remember this adage, which is as important here as in darning stockings.

FARM HOUSES.

One of the most important subjects that can arrest the attention of our farmers, especially such as have yet to provide their farm buildings, is the position, plan, and construction of their houses, &c. If every man about to build, could have the privilege, or be induced to read Mr. Downing's excellent work on "Cottage Residences," we should feel that there would be much less necessity for urging the subject of farm buildings upon the notice of our readers. As it is, we hope every one who is intending to build will look over the matter carefully, and consider well what kind of a house his farm, family, location, &c. demand.

The *position* of the buildings on the farm, with reference to roads, convenience, or health, is a matter of much moment to the farmer. The fashion so prevalent of forcing all the buildings into the road, or as near it as possible, without reference to the condition, or the wants of the farm, is a very great error, and shows a deplorable want of taste and judgment. The less a farmer or his family has to do with the road, except for necessary purposes, the better for all concerned. It is impossible to impart the least degree of elegance, or convey that idea of rural retirement so desirable in farm establishments, and so easily given where judgment and taste preside over the erection of the buildings, to a place where the houses, barns, &c., are on the margin of the highway, or the space in front does not amount to a *yard*, but only 35 inches. There should be convenient and easy access to the road; but farther than this, the roads are of little account in determining the position of the farm buildings, and should be treated accordingly.

Another point should always be well considered in fixing the location of the buildings for the farm; and that is the arrangement in such a way as to reduce the farm labor as much as possible. If the farm is large, the extra travel of men and teams, in hauling manures, grain, &c., going to and returning from labor, will be very much greater where the buildings are fixed at one extremity, or one corner perhaps, than where their position is central, and access from all parts of the farm direct. This is particularly the case where the buildings are fixed not only at the extremity, but also on the highest part of the farm. How often do we see farmers, for the sake of having their houses so near the road that they can hail, and have a chat with every passer by, draw all their hay and grain to the highest part of their farms, the most bleak and uncomfortable point on the premises, summer or winter, when perhaps there are positions eligible in every respect, and well adapted to the convenience of the whole farm. In all calculations with respect to the labor of hauling to and from the farm buildings, it must be remembered that the quantity drawn to, will exceed in quantity or bulk, and consequently in labor, that drawn *from* the buildings, by nearly two-thirds.

Health is another thing which must not be overlooked in the location or construction of farm buildings. All low, sunken, swampy places should be carefully shunned. They are the sources of malaria, and if not virulent enough to produce fevers and other diseases at once, the constitution is not the less surely undermined, and predisposed to maladies of every kind. Good, pure water, here, is of the first importance, and no expense should be considered too great to ensure a permanent and ample supply. It should of course have great influence in determining the position of the farm buildings; and cannot be overlooked without subjecting the operations of the farm to great inconvenience, and the health of the family to the most serious danger.

The PLAN of a farm house is a matter of much consequence. Convenience and comfort are the prime requisites, and should never be overlooked; with these should be combined the elegance and taste, so desirable in every farm establishment. A large house is not in ordinary cases necessary; a high house, never. If the house is well arranged, much less space is necessary than most seem to consider, and it is here that a good plan operates most beneficially. A parlor, sitting, or dining room, kitchen and bed rooms are necessary on the ground floor; above, bed rooms should occupy the principal space. Public opinion is fast banishing the huge two story "shingle palaces," that once were so fashionable as farm houses, and the far neater, compact, and comfortable cottage style of buildings, is fast taking their places throughout the country. This is one of the most cheering indications that those who have endeavored to diffuse more correct notions on the subject of farm buildings, have not labored in vain. Those who wish to consult plans, drawn with particular reference to the wants of the country, will find many of them in the past volumes of the Cultivator, or in the beautiful volumes of Mr. Downing on "Landscape Gardening," and "Cottage Residences." There are few if any plans, however, into which, in consequence of particular location, position, size of family, &c., changes in some respects, may not be advantageously introduced; but the study of such plans, where they are combined with the elevation of the building, and arrangement of the grounds, cannot be otherwise than useful, as correcting false notions, and aiding the arrival at correct decisions. We may here remark that but few builders have any idea of what constitutes a tolerable farm house. Those in the city, form their plans for the city rather than the farm; and those in the country, have in general too little acquaintance with the principles of the art, or are not sufficiently familiar with the great improvements made in the construction of farm residences, to enable them to meet the wishes of those who desire houses in which utility and elegance are united. There are, however, some honorable exceptions, as the farm buildings in some districts prove; and when once the attention of farmers is directed to this point, where they are qualified to form a correct opinion of the buildings they need, there can be no doubt that builders competent to aid in carrying out their plans will be found.

In the *construction* of farm houses, it is important that the best materials be selected, and that strength, firmness, and durability be consulted in all proceedings. Where stone or brick can be conveniently obtained, houses built of these materials are doubtless to be preferred. Their advantages over those constructed of wood in the ordinary manner are very great. They are not only more durable, but the equality of temperature they afford at all seasons, as compared with structures of wood, is favorable to health. In a well constructed house of stone or brick, the saving of fuel is very great, an object of no small consequence, where fires of some kind are necessary in our rooms two-thirds of the year. There is one serious objection against stone or brick houses, which is, their liability to accumulate dampness in the walls, thus destroying or discoloring the plaster or paper, and rendering them in some instances decidedly damp and unwholesome. This objection is however, easily obviated, and the evil prevented, by what is called *furring*, in which the walls are in effect, made double, a space of an inch being left between the lath and plaster and the brick wall, through which air circulates, rendering the interior part, or the plastering, perfectly dry. Convenience is the great point to which other things must be made subservient in the construction of farm buildings; show is but a secondary consideration. In our climate too, reference must be had to preserving a comfortable temperature during our severe winters; a result to be obtained by a choice of location for the buildings, by a proper arrangement and position of the rooms to be occupied by the family, and by such a construction as shall exclude the direct admission of the external atmosphere. Experience abundantly proves that so far as the comfort and the health of the family is concerned, no room occupied by them, should open directly upon the outer air. By connecting them with halls, abrupt transitions from heat to cold, and vice versa, are avoided, and consequent illness frequently prevented. Ample means for ventilation, and the free circulation of air, should always be provided, a precaution necessary to health, and indispensable in the sultry months of an American summer. We hope that every farmer who intends building, will look at the matter carefully, consult the wants and capabilities of his farm, and while he avoids all ridiculous speculations or imitations, see that his plans combine as far as possible, elegance with utility, and simplicity of structure with correctness of taste, in the design.

VERMONT FARMING.

We are indebted to Mr. J. P. Fairbanks for a copy of the *Caledenian*, containing the statement of Mr. Fuller, who obtained the second premium for the best managed farm, from the Caledonia county (Vt.) Agricultural Society. Mr. Fuller's chief attention is given to grazing and the dairy, his farm not being, as he says, well adapted to cultivation. He appears to be a good farmer, and his course of management is undoubtedly in many respects worthy of imitation by others in similar circumstances.

What land he tills, is broken up from the sward in autumn, and sowed the next spring with oats; the stubble plowed in soon after taking off the crop, the next spring manured and planted with potatoes. The third season it is sowed to wheat, and seeded down with ten to twelve pounds clover-seed, and four to six quarts herds-grass, (Timothy ?) to the acre. He states that within two or three years, he has found the furrows of green sward which laid one against the other at an angle of forty-five degrees, produce a much better crop of oats than when turned over flat. He does not particularly inform us in regard to the nature of his soil, but from the remark that it is better adapted to grazing than to cultivation, we suppose that it is rather moist and heavy. If this is the case, it would account in some degree for the advantage of the mode of laying the furrows which is spoken of.

Breeding stock.—In regard to the question whether cattle can be best improved by foreign blood, or by attention in selecting from the native breed, Mr. Fuller gives a decided preference to the latter mode; and observes that were two or three farmers in each town in the county to turn their attention to the matter, the object would soon be accomplished; whereas by the other course, he thinks "half a century may elapse before any think like a general improvement is effected." The grounds for the opinion thus so positively expressed, Mr. Fuller does not give us; but we should think a very extensive experience and observation were necessary to justify so broad an assumption. He does not tell us what trials he has made, or has seen made, with particular breeds, or their crosses, which it is important to know before we can judge of the correctness of his opinion. An experiment with a single animal, or with two or three animals, by no means proves the character of a whole race or breed; much less does an experiment with one "imported breed," prove any thing in regard to the character or usefulness of other breeds. As to the lapse of "half a century" being required "before any thing like a general improvement is effected," we will just remark that we could point to hundreds of cases where a great and acknowledged improvement has been made in a single generation of stock; and what is the insuperable obstacle to such improvement becoming "general" in *five* years instead of fifty ? Let all the best bulls in the country be so disposed of that they may be used to the best advantage, and we are much mistaken if a "general improvement" is not effected and *admitted* in the time we have mentioned.

In saying this, we would by no means discourage improvements by selections from the best of the common stock, especially where better animals can be had than are offered by the imported breeds. Mr. Fuller's course for example, has been attended with advantages, though we can perceive no evidence that he has effected greater improvement than could have been attained by proper crosses with some imported breeds. His principles, so far as any are given, for breeding *dairy* stock, are undoubtedly good. He says, "care should be taken that the mother of the bull should possess all the qualifications of a good cow." He gives his mode of rearing calves, which appears to us to be economical; while at the same time, the results show that his stock are not only well managed and cared for, but from the size they attain at an early age, and the butter obtained from the cows, they must also be of good blood. His calves are taught to drink when two days old, and for eight weeks are allowed seven quarts of milk per day. For two or three weeks afterward, they are allowed a less quantity, when they are weaned and turned into good pasture, with salt always by them. When the potatoes are being gathered in the following fall, the calves are let into the lot, where they soon learn to eat this vegetable. The following winter they are each fed with a quart of potatoes per day till spring. By this method he says he has "never failed of having 2 year old steers that would girt from 6 to 6½ feet the fall after they were two years old. Live weight from 20 to 23 cwt."

We cannot avoid calling particular attention to the dimensions and weight of these steers. The girth, though not extraordinary, shows good steers for that age; but the weight in proportion to the girth is wonderful! We know not what may be the peculiar shape or proportions of these cattle, but from twelve to fifteen hundred is as great a live weight as we ever heard of in animals of the girth given. Again, what would be the dressed weight of such cattle ? Ordinarily, the dead weight of cattle of the girth he mentions, would not exceed 675 to 875 lbs., hide and tallow included. But the usual dead weight from as great live weight as he mentions, "20 to 23 cwt.," is not less than 1350 to 1550 pounds. Mr. Campbell's prize ox, which was slaughtered in this city in Feb. last, weighed alive only 2546 pounds, yet he girthed, by our own measurement, *nine* feet, and weighed, as we stated in our last, 2102 lbs. in beef, hide, and tallow. Is there not some mistake in Mr. Fuller's calculation about the weight of his two year old steers ?

Produce of butter per cow, &c.—Mr. Fuller states that he has never given his cows meal or roots, "worth naming," but for ten or fifteen years past, they have averaged 200 pounds of butter from each cow. Has had cows which in the month of June would give 52 pounds of milk per day for one week, but considers 30 pounds a good yield. He has made from one cow, in the month of July, sixteen and a half pounds of butter per week—the cow being fed only on grass, and allowed salt. He milks his hows early in the morning, and between five and six o'clock in the afternoon, they are milked again. In summer, he never yards his cows. Much of his pasture has never been plowed, and he doubts whether plowing would improve it.

Address to the Addison county (Vt.) Ag. Society, by the President, S. H. Jenison. This is a valuable document, containing sound practical remarks, and much statistical information in reference to the agriculture of that section. We have not room for an extended notice, or for long extracts, but would call attention to one or two important facts mentioned in reference to stock. He observes that the excellent grazing qualities of the soil of Addison county, have been long known. It would seem from what is stated, that the herbage was believed to possess some peculiar qualities, for Mr. J. states he has "heard it remarked that the butchers of Brighton could distinguish by the appearance and feel, the fat cattle from this part of Vermont, from those in market from other places, and that cattle from this part of the State, of the same apparent flesh, had always the preference, opening better, having a greater quantity of tallow, and beef of superior quality and flavor." If there was no mistake about the superiority of these cattle having been as obvious as represented, was it not attributable in a good degree to the breed ? This seems probable, as we are informed by Mr. Jenison, that about the period alluded to, "improved breeds of cattle were introduced into various parts of the county by public spirited individuals." And in reference to the benefits of the introduction of this stock, he observes "every neighborhood can even now furnish a trace of it. I am aware," (he continues,) "that some are strongly biased against improved stock; but I venture the assertion that, where a favorite individual is found, could the pedigree be traced, in most instances you would not go many removes back before you would run against some one of the imported, improved breeds."

Cotton Beds.—In relation to the article on cotton beds, which appeared in the Dec. Cultivator, the Louisville Journal says—"Cotton beds are becoming very much used in steam-boats on the western rivers, and are considered superior to any but hair."

DR. LEE'S REPORT ON AGRICULTURE.

The following report from the Committee on Agriculture, to whom was referred so much of the Governor's Message as relates to that subject, was submitted to the House of Assembly of this State, by Mr. D. LEE, on the 20th March:

Speaking of agriculture, the Governor says: "The interest involved is not merely the most important committed to our charge, but more important than all others."

This is no more than a just appreciation of that portion of the public interests committed by the House to the charge of your committee. Happy shall we be if any thing we can say or do shall serve to lessen the hard work now expended in producing a pound of wool, a firkin of butter, or a bushel of wheat.

Agriculture is a subject that public men are far more inclined to praise than to aid by any legislative enactments. However others may regard the interest of rural industry, your committee believe that, while legislating for half a million of farmers, we owe them something *more* than empty commendation, something *better* than a heartless lip service.

It is known to all that no class in the community give so much muscular toil for $100, as do the common field laborers in the State of New-York. The hard work of skillful farmers is bought and sold at nine or ten dollars a month, and twelve hours' toil is cheerfully performed each day. But the mechanic, the banker, the merchant, the broker, or the professional gentleman, thinks his service very poorly rewarded if he do not receive three or four times that sum.

If a man whose whole life is devoted to the cultivation of the earth, does not and cannot earn so much as the merchant, the physician or the lawyer, in the course of a year, pray tell us what is the *cause* of this inability, that wise legislation may remove it. And if the agriculturist does earn as much as any non-producer in the State, then please inform us how it happens that an experienced farmer must sell his labor at $120 a year; when he cannot hire one experienced in the mysteries of the law or medicine for less than $1,000 a year.

Surely the toiling husbandman *needs*, if he does not *deserve*, as many good meals, as much good clothing, and as fine a house as one that merely studies to acquire, not to produce, the good things of this world. Nevertheless, the fact is notorious that the great body of our rural population somehow contrive to work a little harder and fare a little poorer than any other class in the community.

We learn from reliable statistics that paupers increase among us much faster than population. The number that live from hand to mouth, only one step from the poor-house, is increasing with fearful rapidity. There are already more than 500,000 people in this State wholly dependent on their daily labor for their daily bread.

No government can exceed us in bestowing idle praise on honest productive industry. But what has this Legislature ever done to secure from the grasp of avarice, to each hungry mouth and naked back, a fair equivalent for all the food and raiment called into existence by the mind and hands which God has given to each person?

In our fierce scramble to exchange with the common farmer ten hours' work for ten days' work, are we sure that we do not trample under our feet every principle of justice, and every right of humanity?

What great public good is there in a system of legislation, which operates practically in a way that gives to one family ten times more than it really needs, and compels twenty families to live on half allowance? How long shall we foster in the breasts of a favored few, that morbid "love of money" which is the "root of all evil?"

Never till this unnatural appetite for needless wealth shall be abated as a public nuisance, by removing from the masses the ignorance that feeds it, will agricultural labor be as well rewarded as the misemployed intellect, which now reaps where it has never sown. The increasing pauperism, suffering and crime, so common in the land, spring not so much from a lack of the comforts of civilized life, as from their unequal and unjust distribution.

If the legislature will do as much to instruct the producing classes how to keep and enjoy the entire proceeds of their honest toil, as it does to teach all non-producers how to exchange their shadows for the workingman's substance, nine-tenths of our growing taxes for the support of the poor, and the punishment of crime, will cease forever. On the contrary, so long as three-fourths of any community, give the products of three, four, or six hands, for the little earnings of one hand, just so long will hungry mouths, naked backs, and houseless heads, claim assistance by a tax on the property of those that are better off. According to the official report, the direct tax in this State for the year 1844, was $4,243,100. This will soon be $8,000,000, unless we cease to manufacture paupers, criminals, and needless litigation.

In the common business transactions of society, men submit to be plundered an hundred times, from a seeming necessity. This necessity will always occur, so long as we refuse to be content with a sum equal to the products of one pair of hands. We violate a law of our being, when we strive to obtain a sum equal to the earnings of two intellects, and of four hands. It is obvious that should one-half the community succeed in acquiring a sum equal to the products of three hands to one human being, the other moiety must of necessity limit all their food, clothing, houses, farms and other property, to an average product of one hand to each person. Such is the present lamentable result of our past unwise legislation. If the alarming evils of this system be not corrected, is there not reason to fear that it will at no remote period, call down the terrible but just punishment of Heaven?

Before we prescribe a remedy, let us view the malady in another aspect:

"To know ourselves *diseased*, is half our cure." Our intense anxiety to acquire property without producing it, is an eating cancer on the body politic; and he is no patriot, who is unwilling to have the sore probed to the bottom.

There are in this State, at least ten thousand persons, that enjoy incomes, on an average, of $2,000 each, derived from interest on money, rents, and for personal services. This secures to them an aggregate annual income of $20,000,000. Estimating the average value of rural labor at $200 per head, and it will be seen that these 10,000 rich men, draw from human muscle and thought, a sum equal to the entire products of 100,000 farmers.

Of this large sum, they may consume as much as 50,000 laboring men produce, and then lay up annually $10,000,000. Let us suppose this money is re-loaned, at an annual interest which will double the principal in twelve years. In that length of time the income of one year will become $20,000,000, and in twenty-four years it will become $40,000,000.

In connection with the above figures, it is important to bear in mind that while interest augments the principal four fold in a quarter of a century, the increase of laboring people to work and pay this interest, is only 100 per cent, in the same length of time. Now, is it not clearly demonstrated that, by increasing our tax on productive industry four times faster than the human family increase to work and pay such tax, that pauperism must also increase much faster than the population?

Had not the productive power of man's physical strength been largely expanded by the aid of lavor-saving machinery, propelled by steam and water, within the last twenty-five years, the number of paupers in this State, and of those just above public charity, would be double what it now is.

One of the greatest misfortunes that fall to the lot of the farming community is their extreme proneness to incur liabilities, and undertake the payment of interest. These people do not sufficiently study the relation that capital bears to humanity. They forget that a human being, who must have more than 1,000 meals, to say nothing of clothes, in 365 days, cannot safely offset his productive labor against the *service of dead matter*.

He should freely give for the use of capital, all it can earn without the aid of human muscle and thought, but no more. The poor farmer should ever bear in mind the fact that no amount of silver can possibly produce one kernel of wheat; and if he offset his industry against the use of 3,000 silver dollars, he must either eat what he had before earned, or what some other man produces, or he must starve.

How cruelly have thousands suffered, because they failed to remember that a debt on land will last for 100 generations, and extort from poor, toiling humanity, an annual tribute more remorseless than the grave. Beware, then, how you degrade the human intellect, and human flesh and blood. These greatly need, for their full development and comfortable support in infancy, manhood, sickness and protracted old age, the entire proceeds of one pair of honest hands. Never forget that whatever you give to inert matter, is so much stolen from a living soul and living body. This great truth should be known, that no man can make a beast of burthen of his physical frame, and not inflict infinite wrong on his immortal mind. To supply our natural physical wants, no one need labor beyond what is necessary to impart health and vigor to his body and his mental faculties. Why, then, degrade a human being almost to a level with the ox that he drives, by compelling him, like the patient ox, to give to the world twice as much as he receives in return? It is thus that we create that rebellion against our unwise and unjust laws, which calls for the brute force of military power. It is thus that we are so successful in filling our poor-houses with paupers, and our jails and prisons with criminals.

Suppose a paternal government, acting on the principle of equal and exact justice, were to credit every member of the community, every family in the State, with all the good things produced by the same, and should debit each person and each family, with all they have ever consumed, how few could show a balance in their favor of $2,000? Under a system of just debit and credit with every mouth, back, and pair of hands, how many who are now rich would be bankrupts for thousands? How many, now really poor, would rejoice in their comfortable circumstances?

Suppose every man that has $3,000 at interest, were compelled to work at 75 cents a day, to pay his own interest? Who then would care to overreach his neighbors, and acquire $3,000 which rightfully belong to the families that gave them existence?

It is because $3,000 will draw for its holder, from human bone and muscle, 200 days' work a year, for ten generations, that we are all so anxious to acquire the means thus to eat bread by the sweat of other men's faces, rather than by the sweat of our own. Humanity gains nothing by the circumstance that capital so often changes owners. To the producing classes, who work 100 days at 70 cents a day, for the service of $1,000 a year, it matters not whether this money has shifted owners a thousand times, or only once.

Having thus briefly noticed a few of the evils which affect most injuriously the great agricultural interest of New-York, your committee regard it as a part of their legitimate duty to suggest a remedy.

The objects sought to be attained are these:

First, to increase the productiveness of rural labor.

Secondly, to secure to every cultivator of the soil the entire proceeds of his better directed and more productive industry.

On what does the productiveness of the farmer's labor mainly depend? Surely not on his mere muscular strength, for in that case the mechanical power of a cart-horse will exceed five fold in value the labor of an agriculturist. It is the sound judgment, experience and acquired knowledge of the directing Mind, that imparts productive value to the labor of human hands. And it is mainly because the intellect employed in rural pursuits is less developed than the mind devoted to other and more professional occupations, that agricultural labor is so poorly reward. The truth is that *passive* intellectual faculties are utterly valueless. They produce nothing. Hence, as the mind of a human being lacks science or knowledge, the market value of his mere physical force depreciates in price. Without going into an elaborate argument, your committee appeal to the ten thousand improvements of the age in which we live, as furnishing conclusive evidence that there is no power on earth so productive of great and beneficent results as the power of highly cultivated intellect.

Those that follow the plow, and swing the axe, and gather the harvest, have not, as a class, been instructed in the sciences which reveal nature's process for changing earth, air and water, into bread, meat and clothing. Hence, to manufacture a barrel of pork, or flour, a firkin of butter, or 100 pounds of wool, from the ingredients necessary to form those agricultural staples, the farmer loses one-third or one-half of his labor by its misapplication. To make one ripe wheat plant, nature requires no fewer than fourteen simple and distinct elementary bodies. Each one of these substances has peculiar properties, and not one can serve as a substitute for another.

The laws established by the Creator of the universe, which govern all the changes in the form and properties of matter, whether in a crude mineral or in an organized condition, making the living tissues of plants and animals, are as uniform and unerring as the laws that regulate the rising and the setting of the sun. By studying the operation of these laws, the practical agriculturist is often able to effect a result in a day, which he could not accomplish in a week, while working against the purposes of nature.

It is not far from the truth to say, that 400,000 of the 700,000 children now attending our common schools, are destined to become practical operatives in the great art of making *something* into grain, grass, roots, milk, butter, cheese, wool, fat, lean meat, bone or some of the other numerous products of rural labor. *Where* that something can be found, and *how* the raw materials of all cultivated plants should be combined, so as to give the largest return for any given amount of capital and manual toil, are problems in practical husbandry, which science alone can solve.

If the ashes obtained by burning a ripe wheat, rye, oat, corn, barley or timothy plant, be analyzed, not far from 80 per cent will be found to be silica, or common flint sand. This silica is an indispensable ingredient in the above named crops: and yet, not one particle of this mineral can enter the root of any plant except it be dissolved in water. Now, of all earthy substances, flint sand is the most insoluble. Indeed, you may boil it for hours in aquafortis, sulphuric or muriatic acid, without dissolving it. How, then, is the practical farmer to dissolve this mineral, which, more than all other, forms the *bone* necessary to give strength to the stems of his grain, that they may hold up, without falling, the load of ripe seed in the ears?

Chemically speaking, silica is an acid, and will unite with a large dose of the two alkalis, potash and soda, and form a soluble silicate of those bases.

This explanation reveals the reason why the alkalis in wood ashes are so valuable as fertilizers on sandy soils. On comparing the analyses of maple, beech and oak ashes, with those obtained from cereal plants, there will be found a striking similarity in their respective constituents.

Next to clay, sand and potash, lime, soda, phosphorus, sulphur, chlorine and iron, are the most important minerals found in cultivated plants. To prepare these ingredients for use, the following is a cheap and easy process.

Take ten bushels of newly slaked lime, i. e. ten before it is slaked, and mix it thoroughly with twenty bushels of loam or vegetable mold. Add to the heap five bushels of common salt and an equal amount of plaster of Paris; moisten till the mass is like damp earth.

The plaster will furnish sulphur, and the common salt will yield both soda and chlorine. The latter will leave the sodium and unite with the caustic lime, forming a soluble salt, called the chloride of calcium. The sodium being first converted into soda, will then combine with the carbonic acid from the air and organized matter in the vegetable mold, and form a precious alkaline salt, which will dissolve common sand. This compound still lacks phosphorous and iron. Ground bones furnish the former and copperas the latter mineral If one can get the liquid excretions of domestic animals, or of the human species, and saturate the compost heap with this compound of ammonia, phosphoric acid, and of other valuable matters derived from plants, the fertilizing properties of this artificial manure will be greatly increased

There is no branch of business in which the sciences of geology, chemistry, and of vegetable and animal physiology, are so useful to man, as they are to the practical husbandman. The term science, is but another name for knowledge. It is, however, usually limited in connection with natural phenomena, to the systematic investigation of the laws of nature. Of all men, the practical farmer is most interested in understanding and obeying these wise and salutary laws.

The fact is susceptible of demonstration, that from a general ignorance of these laws, we have wasted in the State of New-York, within the last twenty-five years, the indispensable ingredients that go to form both *bread* and *milk* for our children, which, if placed in New-York and Boston markets, would sell for one hundred millions of dollars.

The guano imported into Great Britian last year, sold for $4,000,000. It is retailed in Western New-York by an exchange of four pounds of flour for one of guano.

To make an acre of wheat that will yield 20 bushels, the plants must have twelve pounds of phosphorus. To purchase that amount of a substance, which forms one of the constituments of the human brain, at a druggist's shop, will cost $24.

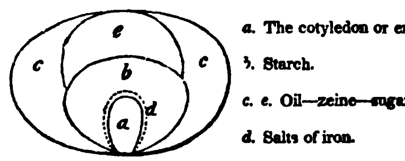
The fact is notorious that there are thousands, if not millions, of acres in this State which once bore 20 bushels of good wheat per acre, that now yield not more than ten bushels. To make our twelve millions of bushels of wheat a year, we annually consume about 7,000,000 pounds of phosphorus. It is the phosphate of lime contained in grass and hay, derived from the earth, out of which all our domestic animals form the solid, earthy portion of their bones. At present prices the phosphorous and ammonia, annually thrown away in the solid and liquid excretions of man and his domestic animals, are worth some $20,000,000.

A cargo of guano—phosphorous and concentrated nitrogen derived from the fish on which sea-fowls feed—arrived in New-York a few days since, which will sell at some $60,000! What consummate folly to throw away the raw materials which form our daily bread!

In a work just published in this country, M. Boussingault states that he has seen fields on the table lands of the Andes, which have produced excellent crops of wheat *annually*, for 200 years. Guano is the fertilizer used on these fields.

Recent experiments in Scotland have demonstrated the practicability of growing 44 bushels of wheat on an acre having only 1½ per cent of organized matter in the soil. It must contain, however, to a limited extent, each of the 14 simple elementary substances which form a wheat plant.

The organized arrangement of the phosphate of lime and magnesia, in an embryo corn plant, and the locality of the salts of iron, zeinc and starch, are worth knowing. The following diagram illustrates the section of a grain of corn:



a. The cotyledon or embryo.

b. Starch.

c. e. Oil—zeine—sugar.

d. Salts of iron.

In the cotyledon or germ, is deposited the phosphates which form the bones of animals, and also most of the glutinous substance which is indispensible in the formation of lean meat, tendon, tissue, and the jelly found in bones. Hence, when the mouse eats out the chit of a kernel of corn, he gets the raw material to make muscle, bone, and brain; and by taking into its stomach the *iron* in the dotted line *d.* this little animal, as well as the ox and man, obtain the substance which give color to the blood, and with oxygen, the vital heat of the system.

The iron in venous blood, is in a state of protoxide. This fluid is loaded with carbon, if not carbonic acid. From these causes venous blood is much darker colored than arterial blood. In the latter the iron is a peroxide, imparting to the blood a light vermillion hue. The fact has often been demonstrated, that the air expelled from the lungs of a warm blooded animal contains 100 times more carbonic acid than the air taken into these organs. As the arteries leading from the heart penetrate every part of the living frame, they convey vital gas—oxygen, condensed in the peroxide of iron—to every portion of the system. This oxygen, while the blood is passing through the tissues from the arteries into the veins, combines with that portion of carbon which has performed its office in nourishing the body, and carries it, in the form of carbonic acid, through the veins, heart and lungs, into the ever moving atmosphere.

In thus burning the waste carbon in the system, oxygen gives out just as much heat to the surrounding matter as it would, provided an equal quantity of vital gas had burnt an equal amount of fuel in a stove.

Every body knows that active exercise will warm him in cold weather—that a horse driven forty miles a day will breathe oftener, evolve more heat and consume more food, or fuel, than he will when standing quietly in a warm stable. The waste oxygen and hydrogen will escape from the lungs of the animal, if quiet, in the form of vapor; in perspiration also, if driven hard. This sweat will carry with it some nitrogen and saline matter, which sometimes crystalizes on a horse by the evaporation to dryness of the liquid that escapes through his skin. But most of the valuable salts taken from the earth in the food of all animals, escapes by the kidneys and bowels.

As the demand for carbon to form fat, muscle, cellular tissue, bone, brain, hair and wool, as well as to keep up a continuous heat of 98° night and day, is very great, it will be seen why *starch* is so abundant, not only in corn, as above indicated, but in all plants used as food for man or beast. Starch contains a large amount of carbon.

It is well known that if a bin of corn be moistened, it will heat and grow or rot. In the process of sprouting, a seed first imbibes some portion of the vital gas that surrounds it, which, uniting with the carbon in the starch, forms carbonic acid and evolves heat. When starch thus loses one portion of its carbon, it is changed into a kind of *sugar*, making, as is well known, sweet bread from wheat a little grown. If a grain of wheat be surrounded by a little waxy clay, only a half inch in diameter, it will not sprout, because oxygen gas cannot penetrate the compact earth. By sowing grain in wet weather, so that the harrow covers the seed with mud, thousands of bushels are lost.

It is a matter of great practical importance to know how to develop a large, vigorous growth of roots. On a poor soil this can only be done by the aid of science. Deep plowing and a thorough pulverising of the soil are indispensable to accomplish this object.

If it cost the farmers of New-York twice as much land and labor to produce a bushel of grain as it does their competitors out of the State, how are the cultivators of the earth among us to prosper?

All the farmers in the Empire State should rise as one man, and insist that the science of keeping property, shall be taught in all their common schools.

The same mental cultivation which will enable an honest tiller of the soil to double the products, and double the value of his better directed industry, will also qualify him to keep and enjoy a much larger portion of the nett proceeds of his labor.

Your committee have been constrained to believe that much of the opposition to agricultural schools in this Sate, has arisen from the well grounded apprehension that if we place the farmers of New-York on a par with professional men, in point of attainments, they will cut off at the fountain the large fortunes which now flow into the hands of men who really produce less than they consume.

These educated farmers will demand, it is feared, an equal share of the honors that accrue to our executive, judicial and legislative officers, and hence the light of science must be shut out from their understandings.

It is now twenty-six years since the friends of agricultural improvement first made a serious effort to establish an agricultural college in this State. Your committee have before them an essay published in this city, in 1819, of forty-two pages, advocating such an institution with unanswerable arguments.

At a later period the lamented Judge Buel succeeded in procuring a naked charter for such a school; but not a single dollar could be obtained to aid private enterprise in teaching the unerring laws of nature to the young men who are to pursue the modern art of transforming solid rocks into fertile soils, and these again into human food and raiment.

Wise legislators conferred unlimited authority on a few Canal Commissioners to expend indefinite millions in cutting and beautifying *inanimate stone* along the line of the enlarged canal; but the law making power refused to grant one dollar to teach the science of rural economy to the sons and daughters of practical farmers. Within the last twenty-six years there has been taken from the public treasury about $200,000 to prepare the candidates for legal honors to study successfully the science of law. We have also four well endowed medical colleges, now drawing from the public funds $5,500 a year, besides $200,000 before received.

We have so long paid a large bounty on all branches of unproductive industry that no young man, of any honorable ambition, will consent to toil, and sweat, and burn in the sun on a farm, for $10 a month, when as a clerk in a store, a bank, a broker's office, or as the student in a doctor's or lawyer's office, he can expect, in the course of twenty years, to command five dollars to one, and at one-fifth of the severe bodily labor exacted of the practical agriculturist. But can all our ambitious young men become professional gentlemen, without rendering these professional pursuits utterly valueless? If learning and science are the great highways to honorable distinction and public favor, why deny these advantages to those that do more than all others to feed and clothe the whole community?

It is true that science is the greatest leveler in the world, but, unlike the leveling of ignorance and brute force, it ever levels upward. It takes the highest point of mental attainment already achieved for its standard; and then wisely and humanely attempts to elevate all below up to that standard.

The object of this effort is to make the triumph *of mind* over *matter* universal and complete. All men, blessed with a common share of common sense, should have, in their every day business operations, the full benefit of the best lights of modern science. Science gives to the poor man unknown and ever increasing power over heat, light, electricity, chemical attraction, air, water, and the solid substances which form the surface of the globe.

All these elements are brought into requisition by nature, in changing crude mineral matter into living, organized beings—into the cultivated plants and domestic animals, produced by the labor of the husbandman. To increase the knowledge of the producing classes does not detract, in the least, from the attainments of any class that may stand, or think they stand, above the common average of the community in which they live.

Why shall we refuse to do as much to make skillful and scientific farmers as we do to make skillful doctors and lawyers?

There are 11,000,000 acres under cultivation in this State, yielding an average product worth $7 per acre. Communicate to the half million of men who cultivate these lands a knowledge of the laws of nature which govern all the results of rural industry, and instead of exhausting the soil of its bread-forming elements at the rate of millions a year, they will improve the land and harvest, at the same cost in labor, three dollars per acre more than they now do. This will add to the productive value of our agricultural industry $33,000,000 a year, and to the revenue of our canals more than one million of dollars. For a large portion of this will go to the cities on the seaboard, and be paid for in goods to be returned through our canals to the consumers. Thus the property dug from the earth will contribute a double toll to the State.

Who cannot see that commerce, manufactures, and all other pursuits in civilized society will be largely benefitted by increasing the productiveness of rural labor? Hence, whatever we give to agriculture is truly given to all classes. By unwise cultivation we have all consumed much of the constituents of human food and clothing that a bountiful Providence spread over the virgin earth in the Empire State. Science now comes to our aid, and teaches us how to change a cold, compact *subsoil*, into a loose, friable and most productive surface soil. It reveals to us *why* it is that a good soil will produce 100 pounds of ripe wheat plants, and yet lose only 15 pounds of its weight and substance by the operation, eighty-five pounds coming from the atmosphere.

In combustion, respiration, and by fermenting and rotting, an immense amount of organized matter is decomposed, and dissipated through the air. These gases are all soluble in water Hence, all the carbonic acid expelled from the lungs of all animals, and the ammonia formed by decomposing organized substances, are dissolved in the rains, snows, and dews in the atmosphere, which fall to the earth, and pass into the roots and circulation of cultivated plants. The leaves also imbibe from the air a very considerable amount of vegetable food.

There are a thousand reasons why the laws of nature should be carefully studied, and as carefully obeyed by our whole rural population. It is by this means alone that they can largely increase the products of their honest toil, and *keep* for the benefit of themselves, and their helpless offspring, those surplus earnings which now go to form the immense fortunes of capitalists. England and Wales have a million and a half of public paupers. Do we desire an equal ratio, as compared with our population? If not, then some power must protect the inalienable rights of labor and humanity.

To make a beginning in this great enterprise of universal education which aims to unite *science with labor*, your committee beg leave to introduce a bill, appropriating five thousand dollars a year, for three years, to the Fairfield Medical College, on condition that the institution shall be connected with a model and experimental farm, for the purpose of teaching both the science and the practice of agriculture. This college was chartered in 1811, and has peculiar and strong claims to the favorable consideration of the Legislature. It has about $15,000 invested in college buildings, which are worthless for any other than educational purposes. The experiment then, if any choose so to regard it, can be tried at this institution cheaper than to erect a new establishment. The trustees are eminently practical men, and will be under the strongest inducements to give success to the undertaking. The college has a library and chemical apparatus worth about $2,000, and many conveniences which will be valuable to an agricultural school.

THE AMERICAN HERD BOOK.

TO accommodate such Short Horn breeders as wish to insert pedigrees of the increase of their herds this spring, in the pages of this work, it will be kept open till the first of July next; by which time it is hoped that all who wish to register their cattle, will forward their respective pedigrees. The lists are fast coming in, and it will be a source of pleasure to the subscriber to make them as numerous as possible, that the array of American Short Horns shall at least show some sort of respectability to their friends on the other side of the Atlantic. L. F. ALLEN.

Black Rock, N. Y., April 1845.

EXOTIC, NURSERY, AND HORTICULTURAL GARDENS,

Flushing, L. I., near New-York.

THE subscribers having established a Nursery with the above title, with the determination of conducting it in the very *best* manner in all its departments, offer for sale, *at reasonable prices*, a *select* variety of FRUIT AND ORNAMENTAL TREES, Hardy Shrubs, Herbaceous Plants, Grape Vines of all the best kinds, superior Strawberries, Fastolf Raspberry, Gooseberries, &c. BULBS and TUBERS, superb CARNATIONS, DAHLIAS, &c., and a most extensive and choice collection of GREEN-HOUSE and STOVE PLANTS, embracing every thing *new* and *beautiful* in that department, personally selected in Europe during the past summer, of ROSES and CAMELLIAS.

We have a very choice collection of the former, full 1,000 varieties, and of the latter nearly 300, all in fine order.

Catalogues of the above will be sent gratis to all applicants, *post-paid*, and every order promptly executed. From unknown correspondents, a remittance, draft, or satisfactory reference expected.

May 1, 1845—eom. VALK & Co.

TO LAWYERS, MERCHANTS, MECHANICS, FARMERS, PUBLIC OFFICERS, &c.

AMERICAN GOVERNMENTAL AGENCY, WASHINGTON.

ON retiring from his official station as Assistant Post Master General, JOHN S. SKINNER, devotes himself to the transaction of GENERAL AGENCY BUSINESS, particularly in connection with the various Departments of the National Government—business in which he is henceforth associated with HENRY O'REILLY, of the State of New-York.

Persons in any part of the United States, who have business to transact with either Department of the General Government at Washington, or with any of the State Governments, or who require researches to be made in the Public Records any where in the Union, can have their requests promptly attended to, by addressing the undersigned.

Extensive acquaintance throughout the Union, consequent on the long continued connection of both the undersigned with the Newspaper Press, with the Post Office and other Public Organizations, will greatly facilitate the prosecution of inquiries and transaction of business through their Agency.

Lawyers, Public Officers, Contractors, and others having business arising under contracts, or under the Pension, Post Office, or Patent Laws—MERCHANTS desiring remission of duties, &c.—MECHANICS or Inventors requiring Patents—and FARMERS having business with the General Land Office—may find this Agency conducive to their interest in the way of promptness and economy. Claims under treaties with the Indian Nations or Foreign Governments also attended to.

Special attention will be paid to those who wish to buy or sell LANDS in Virginia and other Southern States; and inquirers from the North or South, are respectfully referred to our Circular concerning "Agricultural Improvement in the Southern States," lately published in the Globe, Intelligencer, and other Journals.

☞ Letters must be *post-free*, to insure attention; and may be addressed to the subscribers, either at Albany, New-York, or *Washington*—particularly at the latter place.

JOHN S. SKINNER.
HENRY O'REILLY.

☞ Sensible of the manifold courtesies with which he has been honored by editors of all parties, from the time when he established the first Agricultural Journal in America more than a quarter century ago, JOHN S. SKINNER adds this note for the purpose of saying that it will afford him great pleasure to maintain the intercourse thus long continued, and to reciprocate the services of editorial friends who may now favor him with a few insertions of this notice.

May 1, 1845.

CATALOGUE OF
IMPROVED SHORT HORNED CATTLE,

The entire herd of E. P. PRENTICE, *to be Sold at Auction, at Mount Hope, near Albany, on Wednesday, the 25th day of June,* 1845, *at* 10 *o'clock, A. M.*

MR. PRENTICE takes leave to say, that if he could have made the sale sufficiently inviting, he would much have preferred to offer but about half this stock. But, to guard against the impression that the best have been selected, he begs to assure the public, that the entire herd shall be sold without reservation; except, as provided by his published advertisement, in order to retain the blood of some highly valued families, which have been secured at great expense and which could not be replaced, he will ask leave to bid, *openly*, on three or four individuals *only*, they first being designated.

☞ The open numbers attached to the pedigrees, refer to Coate's Herd Book. Those inclosed in parenthesis, to this Catalogue, and the letters to the progenitors, whose pedigrees are given in the Appendix.

Several of the cows and heifers, not yet calved, will come in before the sale, and at that time it will be made known when others are to do so, and by what bulls.

The cattle may be inspected at any time previous to the sale, and any information relating to them will be most cheerfully given.

CATALOGUE.

1. FLORA—Roan cow, calved June, 1837, and imported in 1839—got by Imperial 2151—d. Sophia, (Herd Book, vol. 3, p. 537,) by Waverly 2820—g. d. No. 21, bred by Mr Mason, and got by Satellite 1420—g. g. d. by Cato 119—g. g. g d by Charles 127—g. g. g. g. d. by St. John 572. This cow is a very excellent milker.

2. CATY—White heifer, calved July 17, 1844—got by Fairfax (49) 3754—d. Flora (1.)

3. CALF OF FLORA, (1) by Fairfax (49) 3754.

4. MOSS ROSE, vol. 5, p. 704—Roan cow, calved January, 1837, and imported in 1841—got by Barden 1674—d. Violet, by Young Colling 1843—g. d. Violet by Remus 550—g. g. d Pink by Sedbury 1424—g. g. g. d. Beauty by Hollings 2131—g. g. g. g. d. Lingcropper by Partner 2409, &c. See Herd Book.

5. COMELY—Light roan heifer, calved February 11, 1845, got by Young Leopard, (A.)—d. Moss Rose (4) 704.

6. CATHERINE, vol. 5, p. 153—Red and white cow, calved May 17, 1839, and imported in 1841—got by Mr. Jobson's Sir Robert 5181—d. Clara, by Reformer 2512—g. d. Chilton, by Don Juan 1923—g. g. d. by Lindrick 1170—g. g. g. d. by Sir Alexander, 591—g. g. g. g. d. by North Star, 459.

7. BLAIZE—Red and white bull calf, calved February 28, 1845—got by Young Leopard, (A)—d. Catherine, (6) 153.

8. MATILDA, vol. 5, p. 629—White, calved March 26, 1834—got by White Jacket 5647—d. Heart, bred by the late Thos. Hollis, Esq. at Blythe, Eng., and by him brought to this country, on his removal for settlement in —.

Heart is said to have been a very extraordinary animal, not only in symmetry and general appearance, but in union of valuable, high bred properties. Mr. H. was offered and refused $700 for her, on landing in New-York.

Matilda took the first prize at the Fair of the Am. Institute in 1843. She has now in the yard with her, eight heifers and one bull calf with fourteen of the next generations, and whether considered as individuals or as a family, with reference to form or quality, they are alike remarkable for combination in each, and sameness in all.

9. SNOWBALL, vol. 5, p. 629—White cow, calved May 13, 1836—got by Carlos, (E.) 1787—d. Matilda (8) 629, &c.

10. NUN—Red and white cow, calved April 5, 1842—got by Leopard (D.) 4213—d. Snowball (9) 629, by Carlos, (E.) &c.

11. MELISSA, vol. 5, p. 629—Red and white cow, calved April 24, 1837—got by Carlos, (E.) 1787—d. Matilda, (8) 629, &c.

12. CAROLINE—Red and white cow, calved April 28, 1840—got by Leopard (D.) 4213—d. Melissa (11) 629—g. d. Matilda (8,) &c.

13. CORA—Red and white cow, calved March 6, 1841—got by Leopard (D.) 4213—d. Melissa (11) 629—g. d. Matilda (8) 629, &c.

14. MEG—Red and white heifer, calved June 28, 1844—got by Cato, (B.)—d. Cora (13) by Leopard (D.) 4213—g. d. Melissa (11)—g. g. d. Matilda (8) 629, &c.

15. TYRO—Red and white bull calf, calved January 10, 1845—got by Young Leopard (A.)—d. Melissa (11)—g. d. Matilda (8) 629, &c.

16. DAISY, vol. 5, p. 629—Red and white cow, calved March 18, 1838—got by Leopard (D.) 4213—d. Matilda, (8) 629.

17. NELL—Red and white cow, calved January 30, 1842—got by Northumberland (F.) 4596—d. Daisy, (16) 629—g. d. Matilda (8) 629.

At the State Fair, in 1842, Nell took the first premium in her class, and again did so at Poughkeepsie in 1844.

18. CALF of Daisy, (16) 629—by Fairfax (49) 3754.

19. DIANA, vol. 5, p. 629—Red and white cow, calved March 15, 1839—got by Leopard (D.) 4213—d, Matilda (8) 629.

20. TECUMSEH—White bull, calved March 17, 1844—got by Cato (B.)—d. Diana (19) 629—g. d. Matilda (8) 629.

21. BETTY—Red and white heifer calf, calved Dec. 5, 1844—got by Sultan, (C.)—d. Diana (19)—g. d. Matilda (8) 629.

22. SALLY, vol. 5, p. 629—Red and white cow, calved January 18, 1840—got by Leopard, (D.) 4213—d Matilda (8) 629.

23. DUTCHESS—White cow, calved May 11, 1842—got by Fairfax (49) 3754—d. Sally (22) 629—g. d. Matilda (8) 629.

24. CALF OF (23)—by O'Connell (50) vol. 5, p. 704.

25. ROVER—Red and white heifer, calved May 30, 1844—got by Young Leopard, (A.)—d. Sally, (22) 629—g. d. Matilda, (8) 629.

26. CHARLOTTE—Red and white cow, calved November 16, 1840—got by Leopard, (D.) 4213—d. Matilda, (8) 629.

27. CALF OF (26)—by Fairfax, (49) 3754.

28. ADA, vol. 5, p. 629—Red and white cow, calved October 16, 1841—got by Leopard, (D.) 4213—d. Matilda, (8) 629.

29. CALF OF (28)—by Fairfax, (49) 3754.

30. JUDY—White heifer, calved January 28, 1844—got by Fairfax, (49) 3754—d Matilda, (8) 629.

31. DUKE—Red and white bull, calved January 4, 1845—got by Fairfax, (49) 3754—d. Matilda, (8) 629.

32. APPOLONIA, vol. 5, p. 43—Red and white cow, calved January 26, 1835, and imported in 1838—got by Albion, 2965—d. by Red Star, 4911—g. d. by Chance, 1806—g. g. d. by Shipperly, 2619.

Appolonia is a very extraordinary milker, giving from 24 to 30 quarts a day for months in succession, and never drying before parturition without great care and effort.

33. LOUISA—Roan cow, calved January 28, 1840—got by Leopard, (D.) 4213—d. Appolonia, (32) 43.

34. BURLEY—Red and white heifer, calved May 11, 1844—got by Young Leopard (A.)—d. Appolonia, (32) 43. So far as dam and sire are concerned, this must be all that can be desired for the dairy.

35. SPLENDOR—Roan cow, calved May 7, 1836, and imported in 1839, vol 5, p. 959—got by Symmetry, 2723—d. Pomona, (bred by Mr. Cattley,) by Bedford Junior, 1701—g. d. by Isaac, 1129—g. g. d. by Whitworth, 1584—g. g. g. d. by White Comet, 1582—g. g. g. g. d. by a son of Kit, 2179.

Splendor is a deep milker, giving from 24 to 30 quarts a day through the favorable season. She is the dam of Fairfax, (49,) 3754.

36. PEGGY, vol. 5, p. 959—Roan cow, calved April 4, 1842—got by Leopard, (D.) 4213—d. Splendor, (35) 959.

Peggy is now with her first calf, (Peggy 2d) and gives great promise of milk.

37. PEGGY 2d—Roan heifer calf, calved February 26, 1845—got by Fairfax (49) 3754—d. Peggy (36) 959.

38. RAMBLE—Red and white heifer, calved May 31, 1844—got by Young Leopard, (A.)—d. Splendor (35) 959.

39. CALF of Splendor (35,) by Fairfax (49) 3754.

40. ESTERVILLE, vol. 5, p. 329—Roan cow, calved November 13, 1841—got in England by Daniel O'Connell 3557—d. Esterville 329, (imported in 1841,) by Alfred 2967, (afterwards sold to the King of the French,)—g. d. Amethyst, by Prince of Northumberland, 4286—g. g. d. Young Amazon, by Crusader, 934—g. g. g. d. Amazon, by Sultan, 1485—g. g. g. g. d. Belona, by Mars, 411—g. g. g. g. g. d. Rolla, by North Star, 458. Bulled by Fairfax.

41. JENNY—Roan cow, calved June 12, 1841—got by Red Comet—d. Miss Scotson, alias Daisy, (bred by Samuel Scotson, at Toxteth Park, in England, and imported in 1840,) by Henwood, 4012.

Red Comet was out of Red Rose, by Young Albrin, (imported by Thos. Addis Emmet, of New-York,) by Harlem Comet—g. d. by Sir Martin.

42. JILT—Roan heifer, calved August 16, 1844—got by Sultan (C.)—d. Jenny (41.)

43. Calf of Jenny (41,) by Fairfax (49) 3754.

44. AURORA, vol. 3, p. 258—Roan cow, calved May 24, 1835—(imported in 1839,)—got by William, 2839—d. Adelaide, 258, by Young Rockingham, 2549—g. d. by Wellington, 2824—g. g. d. by Major, 2252—g. g. g. d. by Northumberland, 464.

Aurora is a great and rich milker.

45. TIMOUR—White bull calf, calved July 19, 1844—got by Fairfax (49) 3754—d. Aurora (44) 258.

46. Calf of Aurora (44)—by Fairfax (49) 3754.

47. DORA—Red and white cow, calved April 28, 1841—got by Leopard (D.) 4213—d. the imported cow, Princess, (bred by R. C. Lounds, Esq.) by Henry, 4008—g. d. Beauty, by Fitz Form, 2024—g. g. d. White Princess, (bred by Mr. Hines,) by Cupid, 938—g. g. g. d. Young Princess, by Lionel, 1171, &c. See Herd Book, vol. 5, p. 805.

48. MISS SMITH—Red and white cow, calved August 10, 1837—got by Leopard (D.) 4213—d. the imported cow, Susan, by Dutchman—g. d. Rosina, by Mr. Wetherell's North Star—g. g. d. by Old Comet. See appendix A.

49. FAIRFAX 3754—White bull, calved May 10, 1840—got in England, by Sir Thomas Fairfax, 5196—d. Splendor (35) 959, by Symmetry 2723—g. d. by Bedford, Jun., 1701—g. g. d. by Isaac, 1129—g. g. g. d. by Whitworth, 1584—g. g. g. g. d. by White Comet, 1583—g. g. g g. g. d. by a son of Kit, 2179.

Fairfax took the first prize, as the best two year old, at the Fair of the State Agricultural Society in 1842; and the first, as the best bull of any age, at that of the American Institute, the same year.

He has not since been shown, but has been kept low, and at service. His dam, Splendor (35,) is a very superior dairy cow. His sire, Sir Thomas Fairfax, was got by Norfolk, 2377—d Miss Fairfax, p. 509, vol. 3, Herd Book, by Fairfax, 1023—g. d. Lilly, by Young Warlaby, 2812—g g. d. by Young Dimple, 971—g. g. g. d. by Snowball—g. g. g. g. d. by Layton, a son of Mr. Charge's grey bull, 872.

"Sir Thomas Fairfax" has taken the following premiums, viz: as the best year old bull, at Otley, in April, 1838, three (3) guineas; as the best two year old, at Leeds, in 1839, twenty sovereigns; (at the same time, he won a match of 5 guineas, against Mr. Tempest's celebrated bull, "Daniel O'Connell," which obtained the first prize, as the best bull of any age at the above meeting;) also, as the best bull of any age at the Yorkshire meeting, in August, 1840, the premium of 30 sovereigns; at the same time, beating that noted bull Clementi, in a match of five guineas each, and has never been beaten.

Most of the cows named in this Catalogue, are bulled by Fairfax, 3754.

50. O'CONNELL—Roan bull, calved January 11, 1842, vol. 5, p. 704—got in England, by Sir Peter, 5173—d. Moss Rose, 704, by Barden, 1674—g. d. Violet, by Yonng Colling, 1843—g. g. d. Violet, by Remus, 550—g g. g. d. Pink, by Sedbury, 1424—g. g. g. g. d. Beau-

ty, by Hollings, 2131—g. g. g. g. g. d. Lingcropper, by Partner, 2409—g. g. g. g. g. g. d. Lady, by Holling's bull, 2148—g. g. g. g. g. g. g. d. Lingcropper, by Marsk, 418, &c.

APPENDIX.

A.—YOUNG LEOPARD—Red and white, calved October 5, 1838—got by Leopard, (D.) 4213—d. the imported cow, Susan, by Dutchman—g. d. Rosina, by Mr. Wetherell's North Star—g. g. d. by Old Comet.

Susun was bred by Mr. John Singleton, at Elmsthorp, England, and imported in 1832, with the bull Copson. She was a very extraordinary milker, giving from 30 to 36 quarts a day, for several weeks in succession.

B—CATO—White bull, calved May 3, 1842—got by Fairfax (49,) 3754—d. Diana (19) 629, by Leopard, (D.) 4213, &c.

Cato took the first premium in his class, at the State Fair, in 1842, and also at the American Institute, the same year. He has not since been shown. Was calved after the papers were sent forward for the last volume of the Herd Book.

C—SULTAN—Roan bull, calved July 24, 1842—got by Astoria, 3048—d. Flora (1,) (imported in 1839,) by Imperial, 2151—g. d. Sophia, vol. 3, p. 537.

D—LEOPARD, 4213—Red and white spotted bull, calved in 1832; bred by Gen. Stephen Van Rensselaer—got by Ajax, 2944—d. Beauty, by Washington, 1566—g. d. Red Lady, by Washington, 1566—g. g. d. Panzy, by Blaize, 76.

E—CARLOS, 1787—By Charles, 878—d. Galatea, by Frederick, 1060—g. d. Graceful, by Major, 2252—g. g. d. Graceful, by Comus—g. g. g. d. Graceful, by Denton, 198.

F—NORTHUMBERLAND, 4596—Red and white bull, calved in 1839—got in England, by Prince of Northumberland, 4826—d. Appolonia (32] 43, by Albion, 2965, a son of Scipio, 1421—g. d. by Red Star—g. g. d. by Chance, 1806—g. g. g. d. by Shipperly, 5120.

IMPROVEMENT OF HORSES.

THE entire horse DIOMEDE, which received the first premium of the New-York State Agricultural Society, at the Poughkeepsie Show in 1844, will stand at the farm of the subscriber, near Leeds, in the town of Catskill, Greene county, N. Y., for the present season.

Diomede belongs to a stock particularly calculated for the carriage and road. Their uniformity in size, shape, and color, (bay,) renders them readily matched; and being large and handsome, with fine spirit and constitution, they readily command the highest prices.

All necessary care and attention will be given to mares sent from a distance, at very reasonable charges. Terms, $10 the season. Particulars of Diomede's pedigree, &c., may be learned by applying to the subscriber. WM. SALISBURY.

Leeds, Greene Co., N. Y., April, 1845.

TO WHOM IT MAY CONCERN, ESPECIALLY TO FARMERS AND HORTICULTURISTS—Sulphate of Ammonia, Sulphate of Soda, and Nitrate of Soda—These three ingredients are highly useful for forcing the crops, and for protecting the planted seed against the grub worm. Experience has shown that a fortnight may be gained in ripening and raising the grain; also, tomatoes, turneps, cauliflowers, &c., may be brought to perfection by using the above in a liquid state.

As regards the Sulphate of Ammonia, Professor Johnston says, in one of his lectures, that it exhibits a more marked effect upon the leguminious than corn crops, and upon the produce of grain than on the growth of the leaves and stem, which is owing to the sulphuric acid contained in it, and that it promotes the general growth of the plant, and makes the fields luxuriant, which is owing to the Ammonia.

The same may be said of the Sulphate of Soda and Nitrate of Soda. They are certainly the most useful of manures, and may be employed in a dry or liquid state; if the seed is steeped in a mixed liquid, the worm cannot attack it before the embryo is already sprouting; and by sprinkling once in 24 hours over the fields of vegetables, the leaves of the plants are nourished, and the vegetable stimulated to advancing to perfection. If applied in a dry state, and mixed in the proportion of 5 lbs. of sulphate of soda, and 2 lbs. of nitrate of soda, and 3 lbs. of ammonia, and thrown in heaps of about 30 lbs to the acre, wheat, rye, corn, potatoes, cabbages, turneps, rice, cotton, and similar fields, the crops may reasonably be expected to increase 50 per cent.

The following poisons have been improved and are confidently warranted effectual in every instance:

1. The Patchoully Compound, for dispelling moths and destroying their eggs in flannels, furs, hair seating, carpets, &c.
2. Rat Poison, for permanently eradicating rats without killing them on the spot, from houses, barns, ships, &c.
3. Bedbug Poison, in powder and liquid, the one as a preventive, and the other as a safe destroyer, without allowing them to return.
4. Fly Paper—for destroying flies and musquetoes.
5. Cockroach Poison, for getting rid of this obnoxious and disgusting vermin.
6. Compound Chem. Whale Oil Soap, to shield rose bushes, grape vines, trees, &c., from the worms and other insects.

The subscriber will confidently say that he can warrant all his preparations, having made lately decided improvements, and that he will for instance, surely clear rats from fields and barns with the greatest ease, and without the least detriment.

The only favor he asks, is to follow strictly the specific directions of the subscriber, who stands ready to give all necessary verbal directions, and to apply only personally to him, and not to any other.

Dr. LEWIS FEUCHTWANGER,
May 1, 1845—1t. 60 Maiden Lane, New-York.

AURORA AGRICULTURAL INSTITUTE.

THIS Institution, recently opened, is located on a farm of over 200 acres, lying in and directly adjoining the village of Aurora, on the east bank of Cayuga lake, in Cayuga county, New-York, 16 miles from Auburn, by stage, and 12 miles south from Cayuga Bridge and the Auburn and Rochester Railroad, by steamboat direct, in summer.

Its design is to afford every facility for young men to make themselves thoroughly acquainted with the principles of Agricultural science, and their judicious application to practical husbandry; and particularly to afford young men from our large towns, the most favorable advantages for preparing themselves for Agricultural pursuits.

Terms $150 a year, payable quarterly in advance. No person under fourteen years of age will, as a general rule, be received.

Pupils will be received at any time, and the course of instruction continued through the year without vacations, but permission of absence will be granted if requested.

Applications may be made to B. R. McIlvaine, 44 Great Jones st. New-York, to Rev. W. Roosevelt, 413 Rroome-st., and Hon. B. R. Wood, or the Editor of the Cultivator, Albany.

CHARLES C. YOUNG, A. M., Proprietor and Principal.
ALEXANDER THOMPSON, A. M., M. D., Lecturer on Botany, Geology, Agricultural Chemistry, &c.
DAVID THOMAS, Visitor and Adviser.

May 1, 1845—tf.

DURHAM BULL CALF AND HEIFERS.

THE subscriber will sell a Durham Bull Calf one year old 21st March 1844, a remarkable thrifty animal and good handler; when about 10 months old weighed 720 lbs. He was got by his prize bull Meteor. Also, a yearling and a two year old heifer, one got by Meteor, and one by the imported bull Duke of Wellington. Letters post-paid, will be answered. GEO. VAIL

Troy, May 1, 1845—2t.

TO SPORTSMEN, &c.

THE writer (desirous of being at liberty to travel part of the year, and yet have his interests well looked to,) offers an opportunity rarely to be met with, viz: an interest in one of the most perfect and extensive stock farms, on and around which are game and fish in the greatest variety and abundance. The country is very beautiful in scenery, well wooded and watered. There is abundance of water power on and around the place. The climate is delightful and healthy, a desirable occupation and residence for an invalid.

The farm is already stocked with sheep, horses for breeding, &c. &c., but the number will be increased until there are at least (10,000) ten thousand sheep, and other stock in proportion, to which end improvements are in rapid progress.

The annual expense of keeping the animals is so low, that the profits are large; breeding ewes giving over one dollar and a half clear profit per annum.

The advertiser seeks an agreeable companion as partner in the above interests. Should this meet the eye of such who has taste for field sports and rural pursuits, he may learn farther particulars by addressing, post-paid, the "Editors of the Cultivator," Albany.

May 1, 1845.—1t,

IMPORTED ENGLISH GRASS SEEDS, &c.

JAMES M. THORBURN & Co., have received by late arrivals from England, a variety of the most improved grass seeds, cultivated by the farmers of Yorkshire, Northumberland and Devonshire, and will be found well worthy a trial—among several sorts, are the following:

Cynosurus cristatus, (Crested Dog's Tail Grass)—Excellent for sheep, producing upwards of 6,000 lbs. to the acre—60 cts. per quart.

Festuca pratensis, (Meadow Fescue)—For horses, cattle and sheep, produces very early in the spring—25 cts. per quart.

Festuca loliacea, (Darnel-like Fescue)—Possessing all the valuable properties of Rye Grass, and few of its defects; its produce is larger; it springs earlier and improves by age; well adapted for meadows, which are periodically overflowed—25 cts. per quart.

Festuca ovina, (Sheep's Fescue)—Linnæus affirms that sheep have no relish for hills and heaths that are destitute of this grass—37½ cts. per quart.

Poa nemoralis, (Wood Meadow Grass)—Its early growth in the spring, and its remarkably fine succulent and nutritive herbage, recommend it strongly for admission into the company of the superior permanent grasses—37½ cts. per quart.

Poa trivialis, (Roughish Meadow Grass)—Most valuable for moist rich soils, and sheltered situations; oxen, horses and sheep have a marked partiality for it—25 cts. per quart.

Poa pratensis, (Smooth stalked Meadow Grass)—Not less valuable than *P. trivialis*. Earlier in leaf, and will thrive with less moisture—25 cents per quart.

Also, 200 lbs. Madder Seed, crop 1844, $1 per lb. The Tract of Gasparin on the treatment of Madder, gratis.

Multicole Rye.—A native of Poland, will grow in the usual soil suited to rye. Its produce is wonderful in light soils—12½ cts. per lb.

Spurry.—Well adapted for poor sandy soils, and very rapid growth—25 cts per lb.—(See Report of Commissioner of Patents.)

White French Field Carrot.—Superior to all others. Mr. Hamilton of Vermont, last season raised 1200 bushels on half an acre, and found it superior to all other carrots for stock—$1 per lb., 2 lbs. to the acre.

Essex Spring Wheat.—$3,50 per bushel

Early Prince Albert Peas—ready in 8 weeks—60 cts. per quart—with every variety of Garden Seeds that can be procured.

JAMES M. THORBURN & Co.
May, 1, 1845—1t. 15 John-street, New-York city.

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☞ **ADVERTISEMENTS inserted in the Cultivator, at $1,00 per 100 words for each insertion.**

NOTICE.

IT has been thought for a long time, and often spoken of by men in various parts of the country who feel interested in matters concerning agriculture, that suitable Ware Rooms for Machines and Implements of the most approved kinds, are much needed in this city.

In consideration of this fact, also well known to himself, the undersigned has concluded to open such Rooms in a central position, (No. 5, Burling Slip,) for the sale of Agricultural Machines and Implements *of the most approved* descriptions, on commission, and will receive samples of the same from any who feel disposed to have their inventions introduced to the public from this city.

The undersigned is also exclusive agent for making and vending the "Warren's Improved Portable Horse Powers and Threshing Machines," succeeding H. Bartlett, (successor to L. Bostwick & Co.) who retires on account of ill health.

Now on hand, Premium Plows, Cultivators, Straw Cutters, Portable Mills, Fanning Machines, Corn and Cob Crushers, &c. &c., wholesale and retail.

N. B. All orders for Implements of any kinds will be attended to promptly, also for seeds, &c. JAMES PLANT,
May 1—1t. 5 Burling Slip, New-York city.

PLOWS.

AT the Syracuse Agricultural Warehouse and Seed Store, can be obtained Delano's celebrated Diamond Plow made by Mr Howard Delano, of Mottville, for the sale of which, we are sole agents for this town. Price, $6 for plain plow, and $10 for the wheel, coulter and clevey. Also, a full assortment of the well known Massachusetts Plow, made by Ruggles, Nourse & Mason of Worcester. 300 bushels seed barley, 300 do. pure Marrowfat Peas, 100 do. Clover seed, 150 do. Timothy, and a general assortment of all the varieties of seed sown by the tillers of the soil; Cultivators, corn plows, Wheel-barrows, Churns, Cheese Tubs, Cheese Cloth, Hoops and Presses, Hoes, Manure, Hay and Barley Forks, Shovels and Spades; and a very great variety of articles appertaining to the interest of the husbandman. Orders promptly executed.

Syracuse, April, 1845. FOSTER & NOTT.

AMERICAN Farmers Encyclopedia, price $4—Skinner's Cattle Doctor, price 50 cents, and a variety of other works, for sale at the office of "The Cultivator."

SALE OF FULL BLOODED NORMAN HORSES.

THE subscriber having relinquished farming, will offer at public vendue, at his farm in Moorestown, Burlington county, New-Jersey, nine miles from Philadelphia, on Tuesday, the 20th of May next, his entire stock of NORMAN HORSES, consisting of two Imported Stallions, "Diligence" and "Buonaparte;" two Imported Mares—three full blooded Stud Colts, one, two and four years old—two full blooded Fillies, three and four years old—two Fillies by "Diligence," from a half blood Canadian Mare, three and four years old, and one Filly four years old, by "Diligence," from a well bred English mare, broke and kind to harness.

The undersigned deems it unnecessary to speak at large of the qualities of these horses, so much having been said of this particular importation, (which is believed to be the only one ever made to the United States,) in all the principal agricultural papers. In a few words, they are the Canada Horse, on a larger scale, combining the form, activity and hardihood of that well known race, with greater size and strength. "Diligence" has been a remarkably successful stallion; he has been exhibited at the Fairs of the Pennsylvania and New-York Agricultural Societies, where he was not entitled to compete for the premiums, but received the highest encomiums from the Committees. At the Fair of the American Institute, in New-York city in October last, he received the Silver Medal of the Institute.

It is expected that a large number of the colts of "Diligence" will be on the ground on the day of sale, some of which, no doubt may be purchased. EDWARD HARRIS.
Moorestown, Burlington Co., N. J., March 15, 1845—2t.

ALBANY SEED STORE.

THE proprietor is now receiving from his seed growers, a full and complete assortment of American Garden Seeds, all of which are selected with care, being grown from the best varieties of vegetables to be found in the country; also European seeds, plants and flower seeds from the best establishments in Europe and America.

Fruit trees of all the choicest kinds furnished to order at the lowest market prices, and warranted true as represented. Agricultural and horticultural implements of American and European manufacture. Also, Root-Slicers, Corn-Shellers, Straw-Cutters, &c. Those who wish to purchase or examine are respectfully invited to call.

W. THORBURN, Seedsman & Florist.
March 1, 1846—3 t. corner of Broadway and Maiden Lane.

ADVERTISEMENT.

POUDRETTE of the best quality, prepared by the New-York Poudrette Company, may be had on application to the undersigned, No. 23 Chamber-street, New-York. Poudrette prepared by this company, was used in larger quantities in 1844 than during any previous season, and with very general success, as may be seen by reference to the numerous reports in relation to it now in my possession, a few of which may be found in the Cultivator for April. The price is, as last year, $5 for three barrels, and $15 for ten barrels, or thirty cents a bushel in bulk at the Factory. ☞ Orders by mail, enclosing the cash, will be as promptly and carefully attended to, as if made personally, by D. K. MINOR,
April 1, 1845—2t. 23 Chambers-street, New-York.

PERUVIAN GUANO.

THE subscriber will keep constantly on hand for sale, in large or small quantities, the best quality of genuine Peruvian Guano.

Price in single bags, weighing from 125 to 175 lbs., 2 cts. per lb
for half a ton to one ton, ... 2¼ " "
over one ton to five tons, ... 2 1-8 " "

A. B. ALLEN,
March 20, 1845—2t. 205, Broadway, New-York.

PREMIUM EAGLE, SUBSOIL, AND OTHER PLOWS.

THE subscriber having been appointed sole Agent in this city, for the sale of the celebrated Premium Plows, made by Ruggles, Nourse & Mason, of Worcester, Massachusetts, now offers them for sale at the manufacturer's home prices. They are calculated alike for the Northern Farmer and Southern Planter, and embrace all varieties. Price from $3,50 to $11,50.

The great number of premiums which these plows have obtained at the most important plowing matches, and the universal satisfaction they have given wherever introduced, renders it unnecessary to particularise their merits. They are made of the best materials, are highly finished, and combine light weight and easy draft, with great strength and durability. Though the first price is higher than the common kinds, they do their work in so superior a manner, and with a draft so much easier for the team, that they are universally preferred where known. It has been repeatedly proved that a single pair of oxen, horses, or good mules attached to the Eagle plow, No. 1, in any reasonably friable soil, will easily turn a furrow of 6 inches deep by 12 inches wide. In addition to the above good qualities, being made of the best materials and highly finished, these plows last much longer than the common kind; they are consequently much the cheapest in the end.

Superior Hand and Horse Cultivators. These are made at the same manufactory. Price from $3 to $6,50.

A New Improved Drilling Machine. This is calculated fo sowing all kinds of seeds. Price, $10. A. B. ALLEN,
March 20, 1845—2t. 205 Broadway, New-York.

SEED STORE AND AGRICULTURAL WARE-HOUSE.

OUR Spring supply of seeds is now ready, and we shall be happy to receive orders for Field or Garden Seeds, of every description, Black Sea, Italian and Siberian Spring Wheat, Barley, Peas, Clover Seed, Timothy Seed, Seed Corn, Shaker and other Garden seeds, &c. Also, a full assortment of farming tools selected from the best manufacturers in the country. Hoes, Scythes, Forks, &c. cheap by the dozen. E. COMSTOCK.
Rome, Oneida county, March 1, 1845.

THE CULTIVATOR.

NEW • "TO IMPROVE THE SOIL AND THE MIND." SERIES.

Vol. II. ALBANY, JUNE, 1845. No. 6.

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Is published on the first of each month, at Albany, N. Y., by
LUTHER TUCKER, EDITOR AND PROPRIETOR.

ONE DOLLAR A YEAR.

Seven copies for $5—Fifteen copies for $10,00—all payments to be made in advance, and free of postage. ☞ All subscriptions to commence with the volume.

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OFFICE IN NEW-YORK CITY, AT
M. H. NEWMAN'S BOOKSTORE, No. 199 BROADWAY,
where single numbers, or complete sets of the back volumes, can always be obtained.

☞ This paper is subject to newspaper postage only, being one cent within the State, or within 100 miles of Albany, and 1½ cent for any greater distance.

Foreign Correspondence.

LETTERS FROM MR. HORSFORD—No. IV.

Mayence—Frankfort—Mode of Traveling—Giessen—Prof. Liebig and his Laboratory.

Giessen, Germany, Dec. 1845.

Mr. Tucker—At Mayence, an hour of interval between arrival and departure, permitted me to glance at the most prominent objects. In the river, against the town, are some sixteen grain mills, which seem to be little floating houses, anchored, and their machinery carried by the current. Below the bridge of boats, commanding a fine view of the river and the lands beyond, is a vast red sand-stone pile, interesting as having been the head quarters of Napoleon, when here. It is now a mere store-house. Above the bridge, strong fortifications are going up. Two or three streets back from the river, is the cathedral, of which much was written in the guide books, but which I found it difficult to appreciate from the crowds of little insignificant buildings that surround it; as a specimen of architecture, it is quite lost.

A little farther on is the statue erected to the memory of the accredited inventor of the art of printing. It is of bronze, about 25 feet high—a figure robed, and with a huge bible under the arm—designed by Thorwaldsen. A few yards from it, on one side are wretched little antique buildings, under the shadow of the lofty cathedral; on the other, at no great distance, is the theatre, a splendid modern building; within a stone's throw are the walls about the city, destined to bear up cannon, and echo the peals of artillery; and here in the center, is a memento to the man, through whose invention the features of this ancient city are to be made known to residents of another continent—through which Luther revolutionized the world, and through which we may yet see Mayence strongly fortified without walls and a standing army.

From Mayence to Frankfort, a railway conveyance brings the traveller in an hour and a half. The road is level or nearly so, and the track supplied on either side, much of the distance with a row of trees. Frankfort-on-the-Mayn, is interesting as one of the free cities of Germany. Its streets are about as regular as those of Mayence or Cologne, which is about equal to saying that a right line seems to have had no charms for the practical architects and engineers of these towns. The sashes of the windows are in the form of a cross; being made of four lesser sashes, which, each by itself, turns upon hinges. It is quite impossible to have a window elevated or depressed by weights, since the walls are filled in with bricks. The most modern, as well as more ancient structures, are all arranged in the same way. This is one of the great *Fair* cities of Europe. Every traveller, passing not more than a day here, sees a great many things to be remembered for life. I will mention but two or three. In a narrow street known as the residence of Jews, resides the recently made Baron Rothschild. His dwelling is a palace. A little way from his magnificent dwelling, in a humble unobtrusive structure, still lives his aged mother, refusing to exchange the hearth stones that have become dear to her, for even splendors that few monarchs of the world can command.

Along one of the principal streets, among other displays of costly ware, the colored Bohemian glass, whose manufacture is kept a secret, eclipses every thing of the kind I have ever seen. Blues, carmines, yellows, greens and reds, that seem to have been stolen from rainbows, are impressed upon vessels of every form and use. I understand approximations to the excellence of the article are made in England.

Here also, as in many places on the Rhine, rows of acacia trees have been cropped, causing the branches at the terminus to grow abruptly outward. The cropping again of the branches produces a similar effect upon them, and the foliage is in this way rendered exceedingly dense. It seems to be admired, but I did not find my early estimate of the beauty of the free wide-spreading oaks of the Genesee Valley materially lessened, though driving through them more or less for a day or two. The inhabitants have appropriated a birch shrub to the growth of hedges. It becomes dense by frequent cropping, and seems to serve the purpose well, though much inferior to the hawthorn hedges of England. They compel the same shrub to grow into a variety of fantastic shapes, as ornaments for gardens and passage ways. In a park not far from the theatre, is a statue of Goethe, much in the style of that of Mayence. The poet was born here.

From Frankfort to Giessen, an *Eilwagen* or *diligence*, conveys the traveler in about six hours. The villages along the way are exceedingly numerous, there being one as frequently as one or two miles. The country between is a section of cultivated fields, separated from each other and the McAdam roads, by nothing except little basaltic or red sandstone land marks. There are no dwellings intervening between the villages; some of the towns are walled and garrisoned. The only object that particularly interested me along the route was a mode of evaporating salt. There seem to be springs, like those at Salina, from which the water is taken to the top of a frame work some thirty-five feet high, and then permitted to trickle through bundles of twigs, to vats below. This of course much concentrates the wates, and renders less boiling necessary, an important point where wood is so scarce.

The Eilwagen seats just nine passengers; six in one apartment, and three in the other. The seats are numbered and taken in the order of payment. Luggage is locked up behind and strapped on top. The horses, lean, lazy creatures, are attached by rope tugs which are tied to the whiffletrees, and the driver with a trumpet, and a whip which he cracks perpetually, is uniformed in the most inconvenient apparel for discharging his duties—i. e. he wears a ponderous cloak, with an immense cape. His trumpet rings merrily out at certain unascertained intervals. This famous establishment is under the control of government, and over these beautiful roads, that would witness either in England or America, a speed of ten miles an hour, it lumbers along at the rate of five or six.

Giessen impresses the approaching traveler pleasantly. It is situated upon the Lahn, one of the tributaries to the Rhine, and scarcely equal to the Mohawk at Utica. The country around, reminds one of the valley westward from Little Falls. Upon basaltic peaks on either side are the ruins of castles or towers, seven or eight hundred years old. Between these and the Lahn, the cultivation is apparently excellent. Orchards of fruit trees, and of oak, birch and evergreen, beautify the landscape about, and beside the city of Giessen, not less than ten villages are seen across the valley and among the hills. The road enters the new town, in which the hospital, medical college, Liebig's laboratory and residence, and a series of beautiful edifices are situated. Two low stone structures mark the entrance to the city proper, entirely around which, a distance of I suppose a mile and a half, is a delightful promenade, occupying the site of the old ramparts. This promenade is skirted throughout with trees, and changing its direction every few rods, conducts one through a variety of scenes looking from Giessen across the valley of the Lahn, and out upon the basaltic cones, that in summer must be grateful indeed to students who have all day long been engaged with their books.

The old town has nothing to commend it to generous consideration. Boston is said to have crooked streets, and I have known a little surprise expressed at the serpentine character of some of the avenues of Albany; but they are straight lines compared with the narrow, irregular corkscrew passages of Giessen; and then the buildings upon a street are not parallel to any thing. With scarcely an exception, they are constructed of wood, filled in with brick, sometimes burnt, and sometimes unburnt, and plastered over within and without. The hotels have carriage ways through them, which permit the vehicles of travelers to be taken into a court-yard, where they may remain in safety. All the modern houses are entered from the back side; there being, with few exceptions, no marring the uniformity of the front, with so ungraceful an appendage as a door.* The pavements are excruciating, the citizens seeming scarcely to have known the luxury of a side-walk. Even the pulverized basalt, which is strown over the roads and streets, and ground to dust by the ponderous freight wagons, is swept away in a little time by the street scavengers, and preserved for purposes of manure.

To the vehicles of Germany, I intend to devote an entire letter; but I have already too long postponed an account of the mighty man whose genius has given such impulse to chemical and agricultural science—the teacher who has congregated in his laboratory, gentlemen from every kingdom of Europe, from Great Britain, the United States and Mexico—the man of whom something is known by every individual who speaks or reads the English language—who has been to organic chemistry, what Newton was to mathematics and astronomy—**Justus Liebig**. My first interview with him was in his private laboratory. The reception seemed to me rather that of a military officer than of a scientific man.† He was manifestly engrossed with some matters of thought, and while he conducted me through the different apartments of his great laboratory, I could but feel that working and thinking were the characteristic employments here. A gentleman to whom I was introduced, spake in an under tone, as if conversation were contraband. Liebig turns to me and says, "You may converse in English two or three days, but not more." All this without a smile; decidedly a German mode, thought I, of impressing upon a stranger the necessity of study. I went to seek my lodgings rather depressed. A few days rolled away, and I was one of an audience of about a hundred students assembled in the lecture room awaiting the entrance of the distinguished man. The course of organic chemistry was about to commence. Gentlemen in great variety of costume, with note books, pens and ink or pencils were seated, conversing upon various topics, while before us, the assistant was just completing his arrangement of substances and apparatus to be employed in the lecture of the day. The hour of the lecture was on the point of striking—the murmur of conversation had subsided to a whisper—presently, the whole audience by one impulse rose, and I saw entering and bowing to the salutation, Dr. Liebig. He had just returned from England, where the attentions of the most learned, most wealthy, and most eminent had been lavished upon him, as they have been shared by no man in science in modern times. The published account of the great dinner at Glasgow, had reached Giessen. At Darmstadt, appropriate honors had signalized his return; and now, with the memory of all these things fresh in his mind and theirs, it was most interesting to look upon the scene which the lecture room presented.

The apartment in an instant was breathless, and the lecture commenced. What it was about, I was able to see from the formula on the black-board, and from a word now and then which I understood, but I was too much absorbed with the manner, to give much attention to what he said. He is perhaps two or three inches less than six feet, and stands quite erect, though a little rounding of the shoulders from much writing, labor and study, might be seen if made the especial object of search. His figure is slender rather than stout, which makes him appear taller than he really is. All his movements, and particularly those connected with demonstration, experiment, or illustration, are graceful to a degree I have not seen equaled in any lecturer. To see him hold in the same hand three glass test-tubes and an equal number of stoppers, while with the other he pours from vessels containing re-agents, at first a little excited my surprise. The portrait that to some extent is circulated in America, represents him much younger than he appears. Another, a lithograph, has recently been published, which is better; but no picture can be made of him. There is an expression of thought in all his attitudes and movements, which I could have scarcely believed upon the mere relation, and which the crayon cannot commit to paper; whether with the chalk and sponge, or with the index finger along the chin and nose, presenting that most singular of all German attitudes, or in gesticulation, or with apparatus, it is all the same. He is all mind—and it beams as distinctly through its corporeal tenement, as his chemical compounds are seen through the vessels that contain them. His detail of chemical decompositions and recompositions is clear and expressed without any circumlocution in terms, comprehended by every one. Occasionally these details bring him to review some investigations and theories of his own, and then a new animation is superadded to his ordinary bearing, and the illustrations are dramatic. His large eyes expand, and his features seem to glow. The gesticulations are sometimes so happy and so numerous, that I have fancied one might understand some of his themes even if he were unable to hear.

His notes consist of a few formula, written out upon two or three little strips of paper; and yet his lectures are as systematic as if elaborated with the greatest care. I have heard the remark made that Liebig is not an expounder of chemistry or an operator in chemistry, but is chemistry itself. I am inclined to think the remark encases a German idea, for it has quite eluded my humble American apparatus for sounding. Still, it is not difficult to see some of the probable data upon which this notion is founded. For example, he enters the laboratory, where he is surrounded by gentlemen engaged in a great variety of investigations. Here is one upon Benzoic acid, there one upon Hippuric acid, there one upon Allantoin; there one upon the Cyanogen compounds, here one upon a new gum, here one upon cheese, there others upon bread—and so on, all of them engaged in original investigation. He is ready to tell them the results for which they may look. Such is his familiarity with every fact in known chemistry, that its analogies are perpetually present, and enable him to premise almost any thing with regard to problematical investigations.

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* An association which in the New World, would be sought for at a distance from eating and sleeping apartments perhaps, and indeed uniformly disconnected from the residence, and carefully concealed in shrubbery, here salutes one as he passes into what we would consider the entry hall.

† Frequent personal interviews have shown me that the bearing observed on the morning of my first visit, belongs to the laboratory and the station of instructor alone. Every where in private life, either around his own board, or in assemblies with friends, or in skating on the Lahn, he is among the first in giving the impulse to pleasure.

He comes to a gentleman who has a new substance. The Professor directs him to bring a dozen test tubes, and perhaps an equal number of re-agents. The unknown substance is in a few moments distributed among the test tubes awaiting the reactions. He goes on through the laboratory repeating similar experiments with other gentlemen; and the next day when he comes round again, if a test tube has been removed from its place, he knows it; moreover, the gentleman who by mistake leaves a process for a night, which ought to have been concluded at once, not unfrequently finds it, on his return the next morning, removed to the Professor's private laboratory. This vigilant surveillance, this powerful local memory, this readiness in affording explanation in all difficult matters connected with chemistry, have induced the expression of the above opinion. However, Liebig has quite deprived the opinion of its poetry, for he has said, for the encouragement of all his pupils, that every fact in the science cost him labor to acquire and labor to retain; and though now ready to pronounce upon the history and properties of every known organic and inorganic compound, he has acquired this prodigious mass of scientific information, only with prodigious labor.

Respectfully yours, E. N. Horsford.

MR. NORTON'S LETTERS—No. XI.

Prof. Johnston's Lectures—Refuse of Distilleries—Sugar Cane—Silicate of Lime—Patent Manure—Guano Birds.

Lab. of Ag. Chem. Association, Edinburgh, March 19, 1845.

Mr. Tucker—I had the pleasure yesterday of attending the first of a series of monthly meetings, which are to be held by the Ag. Chem. Association in conformity with one of their rules as to the duties of the chemist, by which he is required to devote a certain portion of his time to giving advice to members of the Association wishing the benefit of his counsel, and to communicate both the results of inquiries in the laboratory, and of his journeys through the country. Prof. Johnston, untiring in his efforts for the good of the agricultural community, exerted himself so successfully to make this meeting interesting and profitable, that I cannot do better than to notice some of the subjects which were brought forward.

The report of proceedings during the past month, was opened by an account of lectures which Prof. Johnston had delivered at Linlithgow and Colinsburgh. I heard both of these lectures, and saw the eager and delighted audiences who pressed forward to catch every word. Applications have since been made requesting their publication.

In mentioning some of the subjects that have been lately investigated in the laboratory, the first touched upon, was the refuse liquor of distilleries. Now distilleries in *our country*, I am happy to say, are diminishing in number, yet it is interesting to know that the residue after the first distillation, contains substances that are highly nutritious, and also valuable as manures. A large quantity of phosphate of lime is present, and constitutes much of its value. The "dunder," or refuse from the distillation of rum in the West Indies, has also been examined here, and found to be quite valuable. In connection with the same subject, was analysed the ash of the sugar cane, and the intelligent planters, instructed by the result, are now effecting a great saving by the restoration of it, as well as the dunder, to their land.

In my last letter, I made some remarks upon the silicate of lime. Prof. Johnston at this time, brought forward the same subject, illustrated by an analysis of a slag sent from one of the iron smelting furnaces in Ayrshire. Mr. Cameron, fourth assistant in this laboratory, analysed it with the following results:

Alumina,	25.36 per ct.
Lime,	39.47
Magnesia,	22.75
Silicious matter,	32.19
	99.77

The quantity of lime, it will be noticed, is very large, but being in the state of silicate, it will therefore not be immediately available for the growth of plants, especially while it remains in hard masses. The gentleman who sent it says, however, that it may be crushed for a shilling a ton. In this finely divided state, it may be applied with much advantage, as its decomposition, constant, though slow, will furnish an unfailing supply of lime. Of course it should not be compared with limestone or marl, but it may be very valuable where neither of the other two can be readily obtained. It might be laid on in large quantity without fear of injury to the land.

The Cornwall Patent Manure, and the Saldnha Bay Guano, which I also mentioned in my last, were commented upon, and the unfounded pretensions of the Cornwall manure exposed. Mr. Fromberg, the first assistant, has just analysed a sample of guano, from a cargo just arrived from Possession Island, a new locality. The following is his result:

Water,	12.72 per ct.
Organic matter and ammoniacal salts,	42.60
Common salt and sulphates and phosphate of potash and soda,	15.11
Phosphates of lime and magnesia,	15.96
Carbonate of lime,	trace.
Insoluble silicious matter,	13.36
	99.76

This is by no means equal to the best samples from South America or Ichaboe, but will compare well with some of the inferior cargoes. It is probably at present prices, worth about £6 per ton.

As guano begins to fail, they are bringing home the bodies of the birds themselves. Some of them were lately sent here, in order that their value as a manure, compared with that of guano, might be determined by Prof. Johnston. They had lain buried for years under the guano, and in appearance resembled the smoked geese from the Shetland Islands, sold in the shops here. They are quite saturated with ammonia, and their large bones add much to their value. They would require chopping into small fragments before depositing in the soil, and in consideration of this serious drawback, Prof. Johnston considers them worth about £4 per ton, or nearly $20. Were it not for this difficulty, they would be worth as much as guano itself.

The remainder of the time alloted to the meeting was occupied by a discussion as to the best means of preserving the immense quantity of manure carried into the sea by the sewers of the city.

The next meeting is on the 9th of April, and a most interesting list of subjects is proposed. Of this I may also give you a sketch in a future letter.

Truly yours, John P. Norton.

MR. NORTON'S LETTERS—No. XII.

Edinburgh, April 27, 1845.

L. Tucker, Esq.—It has occurred to me that in addition to my own letters, a series of practical papers from one of the farmers of the Lothians, a body of men confessedly surpassed by none in any part of the world, might be both interesting and highly instructive to the readers of your paper. Mr. Girdwood has kindly volunteered his services, and I may say without flattery, that very few, even in Scotland, are so well qualified for such a task. I cannot help saying that I sometimes disagree with him in theory, as for instance in the present article, I would have based the theory of rotation upon the physical condition as well as the inorganic constituents of the soil, but in practical matters I would bow to his decision. Without further preface, I am sure that your readers will be benefited by the advice of one who unites the practical wisdom of the Lothians to the enthusiasm of early manhood, and who is making himself also a proficient in chemical science as the means of yet farther advance in his favorite pursuit. Truly yours,

JOHN P. NORTON.

ROTATION OF CROPS.

Featherhall, Mid-Lothian, Scotland, April, 1845.

To the Editor of the Albany Cultivator:

At the request of my valued friend Mr. NORTON, I propose, should my time permit, and your columns afford room, to give you a series of short papers on the Agriculture of the Lothians, in the hope that they may prove interesting to a portion at least of your numerous readers.

I am unwilling to suppose that there is nothing in the experience of a district, so long famous for its agriculture, that may not be studied with profit, even by individuals possessed of great skill and knowledge in that most useful of arts; but at the same time I am aware that the most valuable parts of our system, may have already been transplanted, and may even now be flourishing in the United States, with all the luxuriance which a virgin soil imparts. Had I been ignorant before, the perusal of some late numbers of your excellent periodical must have convinced me that your countrymen are applying their favorite maxim, "go ahead," in a most emphatic way to this branch of industry—a course in which all men must wish them good speed. Having these considerations before me, it is with considerable hesitation, that I venture to make my appearance in the columns of the "Agricultural Literature" of America.

Trusting to your indulgence, I shall therefore devote this letter to some introductory remarks on the rotation of crops. I am fully aware that the sanguine expectations of some, as to the application of chemistry to agriculture, lead them to believe, that at no distant day, rotation of crops will be numbered with the things that were —that the finger of science will point out to us, not only the substances removed with each crop, but also how we may replace them in an economical manner. I am too ardent an admirer of chemical science to doubt its power to do this, but I cannot believe that it will very materially affect the axiom that a sound and philosophical system of rotation, is the basis of all judicious and profitable agriculture; for even were we so far advanced in chemical knowledge, as to be able to grow luxuriant crops of wheat year after year, on the same land, without deteriorating it, it is evident that the supply of this sort of grain would soon exceed the demand. From thus being the most remunerating of crops, owing to the limited extent of land on which it can be grown, it would gradually become less so, while the supply of the other corns which are less remunerating, owing to the fertility with which they can be grown on moist land, would be shortened, and the price of course enhanced; and when that point was reached, at which the profits were equally balanced, the further application of the principle would be arrested. I apprehend therefore, that the legitimate occupation of chemistry, is to point out to us how we may avail ourselves of the large amount of inorganic substances laid up for us in our own soils, by supplying those of which they may be in want—to show us how to draw upon nature, so that our drafts may be honored—how to pay the interest, that we may have the use of the principal, rather than that we are to look upon our fields, as a mere extension of space—the floor of a manufactory, into which we are to bring from without, *all* the raw materials required for the production of the substance we propose to obtain.

The theory upon which the rotation of crops is based, is, that different plants require different series of the inorganic substances contained in the soil, for their growth and development; but as these substances require the action of tillage and the *seasons* to reduce their particles to that minute state of division, in which they can be absorbed by the spongioles of plants, therefore the less frequently those plants which require the same series of inorganic substances are reared on the same soil, the more copiously will they be supplied with properly prepared food, when they are reared.

The following table from the Transactions of the Ag. Chem. Association of Scotland, shows the amount of inorganic substances contained in three different soils, and that a fertile soil contains at least 9 or 10 of these substances.

	Very fertile.	Fer. with manure.	Barren.
Organic matter,	97	50	40
Silica (in the sand and clay,)	648	833	778
Alumina (in the clay,)	57	57	91
Lime,	59	18	4
Magnesia,	8½	8	1
Oxide of iron,	61	30	81
Oxide of manganese,	1	3	½
Potash,	2	a trace.	a trace.
Soda, } Chiefly as common salt,	4	0	0
Chlorine, } Chiefly as common salt,	2	0	0
Sulphuric acid,	2	½	0
Phosphoric acid,	4½	1½	0
Carbonic acid combined with the lime and magnesia,	40	4½	0
Loss,	14	0	4½
	1000	1000	1000

Now it must be evident to every one, that if we go on for a length of time raising any particular crop which carries off a larger quantity of any of those elements than the relative proportion of it in the soil, we must by and by reduce the fertile soil to the state of the barren one. As an example, we may take potatoes, which contain a large quantity of lime, magnesia, potash, soda, and phosphoric acid. Now it will be seen that these very substances are almost all wanting in the barren soil; we may therefore conclude that if we go on raising potatoes year after year without adding the whole of the substances removed, we will reduce the fertile to the state of the barren soil.

From what has been stated, it must be obvious that a proper course of rotation, is that which removes equal relative quantities of the different substances composing the soil, and which places those plants which feed on the same substances, at as great distances from each other in the rotation as possible. This holds good even in the vicinity of large towns, where, from the facility of obtaining manure, a large portion of, if not all the substances carried off, are returned to the soil; as by adhering to a judicious rotation even in this case you present such a profusion of aliment to the different classes of plants, as to convert *good crops* into *luxuriant ones*. In forming a correct judgment of any course of rotation, we must also take into consideration the facilities it affords for eradicating weeds, and keeping the land in that state of absolute freedom from them, which, while it adds profit, so it ought to be the pride of every agriculturist.

In my next, following up this subject, I shall give you some account of the rotation of crops as practiced in the different districts. I am, sir, your most ob't serv't,

JNO. GIRDWOOD.

MR. MITCHELL'S LETTERS—No. VI.

Island of Jersey—its Agriculture and Exports—Jersey Cows.

St. Saviour's Parish, Jersey, March 1, 1845.

LUTHER TUCKER, ESQ.—Jersey is like a garden; the soil rich, the tillage thorough, the enclosures small, and surface most various. I have not yet seen a single field of more than half a dozen acres, nor one of more than three, presenting the same plane to the sun. The fences are high hedge rows, about twelve feet broad at bottom, by four or five at top, covered with green turf and ivy, and shooting up tall elms of eighteen inches diameter from their tops. The law obliges every man having such trees along the south side of a neighbor's enclosure, to keep them lopped—the consequence is, half the hedgerows bear the strange growth, of a tree without limbs. The farms are small, and farmers many, who in most instances, own the lands farmed. Jersey laws, unlike the English, provide for younger brothers, and at the death of a father, makes one farm into many. The size ranges from five to forty acres. The lands grow chiefly apples, potatoes and grass. The agricultural exports are cider, potatoes, wheat and cows. The orchards are scattered thickly over the Island; scarce a house being without its perquisite of cider trees. The trees are small, and covered with a green moss, the consequence of the humidity of the climate; I observed the same of the orchards of Devonshire. A great deal of cider is drunk, and many thousand hogsheads shipped annually to England. Their best apples for eating, are much inferior to ours, though superior to any I saw in England. They are fair and beautiful to the eye, but lack flavor and life; the best I have seen is a Pearmain, of flavor very like our Seek-no-further, but inferior to it. They sell at a penny and a half-penny each. Pears, I am told, are of unusual goodness; they have not only the best French varieties, but one peculiar to the Island, of extraordinary size and rarity, selling in its season, for half a dollar each. The cider (I have drunk only the new made,) is very rich. The mode of making quite similar to that with us; as with us, there are here various nostrums for preserving its sweetness.

The potatoes are excellent; large, fair, very white and mealy when boiled, and of the best possible taste; that is, no taste at all. Their crops are large; great numbers pass along the street every day for shipment to England, and various other parts. Both their excellence and abundance are owing, I think, in a great measure to the peculiar culture. An old green sward, is in the winter run over with an exceedingly light furrow, just sufficient to turn the turf. This is left for a month or more exposed to the weather; the field is then cross-plowed, after a very different fashion. To use the words of my informant—"We first skims it, and afterwards we puts the big plow, and ten or twelve horses to her, and takes it down about a foot." The plows are monstrous; very strongly made of wrought iron, and perform the work most thoroughly; their operation differing from the subsoil plow in turning the decaying turfs to the bottom—thus leaving a light deep bed for the tubers. The gearing of the plow is singular, the horses being attached by means of a short rod, and pair of wheels. No small farmer, indeed none on the Island, could command sufficient force for such plowing. But by bringing together the draft horses of a dozen neighbor farmers, the work is effected. This interchange of work is very prevalent in harvesting, as well as breaking ground. The potatoes are invariably cut for seed—dropped in a furrow and covered by a lap of the furrow; planted in drills; and the digging is effected by means of a double mold-board plow. They sell now for exportation, at from 40 to 50 cts. per bushel. They are not, like crops above ground, subject to tithes.

Hay is of good quality, and bears a high price. Nearly all the valleys and lower grounds are kept in grass; and in those which are irrigated, even thus early, (1st March,) there is a cut, longer and thicker and stouter, than in a New-England door-yard, at 1st of June.

All the wheat raised in Jersey is exported. It is explained from the fact that imposts are not known here, and produce of the Island goes to England duty free. The consequence is, farmers find it most profitable to ship their wheat for English prices, and to return for their own consumption, American flour, from the English warehouses, or to supply themselves with bread stuffs from the continent. Absence of duty enables the farmer to purchase other provisions proportionately cheap. Thus, best of Santa Cruz sugar is 7 to 8 cts. the pound, &c. It might appear that advantage would be taken of the privilege of free shipment of Jersey grain to British ports, to mix foreign produce with home stores, and so multiply profits. This is strictly guarded against. Every farmer is obliged to report at the opening of each season, the number of acres he means to put to wheat, barley, &c., to the Island authorities, with an estimate of the probable crops; and any falsification is punished by heavy fine.

Jersey cows are famous; they are better known in England and America as the Alderneys. There is but trifling difference in the breeds of the two Islands; if any, it is decidedly in favor of the Jerseys, in point of size, general appearance, and milking properties. About two thousand are annually exported from this Island; and remembering that the Island compasses but about 40,000 acres, you will conclude, with me, that some roots are "made," (this is their term for growth,) some hay is made, and some money is made. The cows are of middling size, small heads and necks, short crooked horns, clear, intelligent eyes, with small feet, high hip bones, heavy quarters, large bag hanging low; their color is a yellowish brown, changing to deep chestnut along the line of back, and frequent white spots. They are kept stalled in the winter, save an occasional turn out to grass or turneps, upon a pleasant day, at which times they are tied to a stake driven in the ground. They are always kept tethered in the field, summer or winter. Either head tied to foot, or to tree or stake. Various reasons are given; the best, they do not get at the apples, they consume less feed, and (a doubtful one,) they give more milk. They milk them until within a short time of calving, and feeding on parsneps, turneps, and hay. In summer they are milked three times a day. The heifer calves, in consequence of the demand, are all raised. The calf is not suffered to be with the cow at all, but fed upon milk and slops. No cow can be imported into Jersey from any quarter, under a heavy penalty. This is to guard against corruption of the breed; of which Jersey people are over proud. Talk to a farmer of the merits of any English breed, and you will bring a torrent of his Island *patois* about your ears, less tolerable than the bleating of his motherless calves.

Veal begins now to appear in the market. I have tasted none but French, which was miserable. Butter is beautiful. The dairies are above ground; milk is set in earthen pots; in hot weather, suffered to sour before it is skimmed; butter is never worked with the hands. It is made into stamped pound cakes, which bring about 25 cents each. A curious custom prevails in the market, relating thereto; twice a week an examination is made by proper officers, of the butter; if any falls below weight, even so much as half an ounce, it is taken away and given to the poor. The consequence is, the pound cakes range an ounce *above* weight.

Manure is saved with care; there is little draining and little needed. Irrigation is general. There is no lime, or marl, or gypsum, or peat, upon the Island. But, says an old historian,—"The winter *oraic* (our Cape Ann rock weed,) being spread on the green sward, and after, buried in the furrows by the plow, 'tis incredible how with its fat unctuous matter it meliorates and fertilizes the earth, imbibing itself into it, softening the clod, and keeping the roots of the corn moist, during the most parching heats of summer." I should like to tell you more of Jersey, but this is the end of my sheet.

Yours truly, D. G. MITCHELL.

KERRY COWS.

Great yield of Butter.—In the rough and mountainous parts of Ireland, there is a small race of cattle called the Kerry breed. They are considered indigenous to the country, and are much esteemed for their good qualities—especially for the dairy. From the descriptions and engravings given of them by writers, particularly by Youatt, and by Low in his "Illustrations of British Cattle," they appear to be a beautiful as well as hardy and useful variety. Mr. Youatt says—"The cow of Kerry is truly a poor man's cow, living every where, hardy, yielding for her size abundance of milk of a good quality, and fattening rapidly when required."

Mr. COLMAN, in his late speech at Sir Charles Morgan's cattle-show, spoke of the Kerry cows as follows:—"He found in Ireland a dairy consisting of five dairy cows, from which the owner had sent to Liverpool, twenty-five firkins of butter, averaging 64 lbs. a firkin, and that was 320 lbs. of butter to each cow for the season. He conceived a stock of dairy cows worthy as much attention as a stock of fat cows. He believed from observation, and observation not confined to a few years, that in many localities, the farmer's best property, would be a good stock of dairy cows." (Report of Mr. Colman's speech in the London Farmer's Journal, Dec. 30, 1844.) In the Journal of the Royal Ag. Society, we find an account of a trial made between three Ayrshires, three Galloways, and three Kerry cows. The Ayrshires gave rather most milk, but the Kerries exceeded them all in butter.

Domestic Correspondence.

RABBITS.

MR. TUCKER—In your last November number, you intimated that if any of your readers had had experience in breeding and rearing rabbits, you would like to hear from them. The result of my experience you can have in a few words.

A few years since I purchased a pair in the month of May, and before the next winter, the doe produced twenty-eight young ones that lived and were fatted, besides a number of others that died. Since that, I have kept a supply all the time, and can assure your readers that a fat rabbit, stuffed and roasted, is not bad to take at any time. One rabbit has about as much meat as two full grown fowls, and the trouble of taking care of them is very trifling. Finding that, like some bipeds, they were sometimes disposed to make a bad use of their liberty, I constructed a pen of rough boards 10 by 14 feet, and 3 feet high, with a floor and roof. This I divided into three apartments, and put in them a number of tea, candle and glass boxes, with a hole in each large enough to admit a rabbit, and sprinkled in a little hay or straw. For food, I give them through the summer little else but the weeds of the garden; and in the winter, the refuse beets, carrots and cabbages, with a little bran or oats. In this way, attended mostly by children, to whom they afford much pleasure, they grow fat and multiply surprisingly; and their skins supply all the little girls with pretty muffs and various trimmings for their clothes. On the whole, Mr. Editor, I would recommend the keeping of a few rabbits as a source of profit and pleasure; and especially as the outlay, the cost of food, and the trouble, are hardly worth naming. The breeding of them on a large scale for market, might doubtless be made profitable, for the supply is seldom equal to the demand.

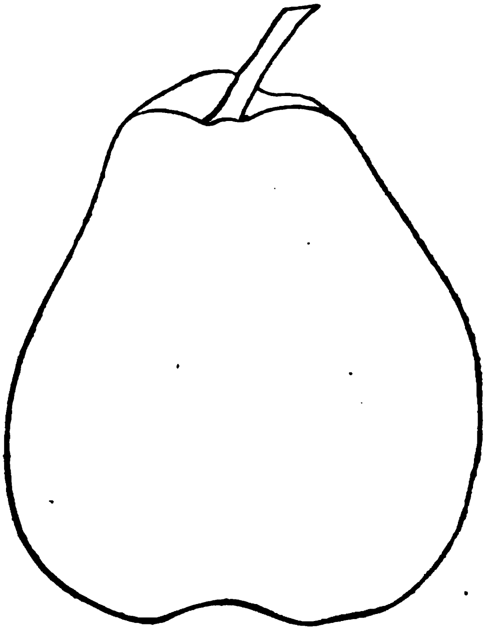
Your correspondent, W. J. Powell, of Marshall, Michigan, inquires in your January number, what course of treatment will produce a large crop of grass on lands in his vicinity, "*admirably adapted to the growth of wheat and other grains.*" I think the answer may be given in a few words, *sow a much larger quantity of seed.* A soil good for wheat, possesses all the constituents for producing an abundant crop of grass; and he admits that clover and timothy readily take root and become very tenacious in the soil. Sow your seed plentifully then, and other requisites being attended to, a large crop is ensured. H. A. P.

SEEDLING PEARS.

HON. H. W. Edwards, late Governor of this State, having in his garden some seedling pears of great excellence, was requested by the Pomological Society of New-Haven, to give an account of the process which he pursued in obtaining them. He accordingly read to the Society some memoranda made by him in 1839.

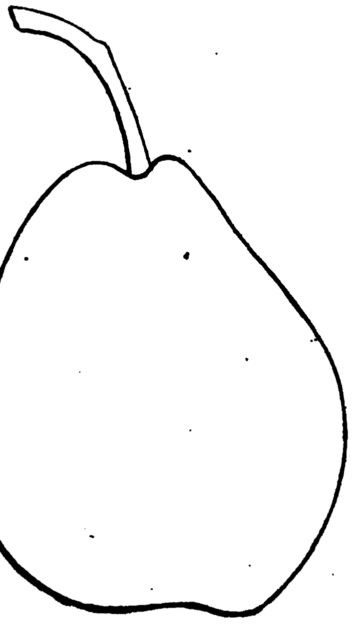
The success of his experiment is well calculated to encourage others to "go and do likewise." I propose to lay before your readers a few of the details of Gov. Edwards' management, as given by him, and a brief description of some of his pears, furnished mostly by the kindness of Dr. V. M. Dow, Secretary of our Society.

The seeds were planted in the summer and fall of 1817, and spring of 1818; some when the fruit was ripe, some late in the fall, and some early in spring. In some instances, the core was planted with all the seeds in. *He planted none but the seeds of good pears.* They were inserted from one to two inches deep in the earth. No particular difference was observed in the growth, arising from the difference in the time or manner of planting. When the whole core was planted, the trees came up in clusters, and soon after they came up were transplanted to a few inches from each other, in rows far enough apart for the hoe to be used. All the trees were transplanted at two years old to about a foot apart. The ground was kept clear of weeds, and manured occasionally. At six years old, about 25 were transplanted, the 8th of March, to different parts of the garden, where they now stand. About 20 were left in the nursery. Some of the trees commenced bearing in ten years from the seed; others have come in bearing in succession up to 1844. No two trees bear fruit exactly of the same kind, and no one tree bears fruit exactly like any other known. In some instances, the resemblance is sufficient to indicate their origin; and when this can be traced, they prove in some cases superior, and in others, inferior to the original.



1. EDWARDS.

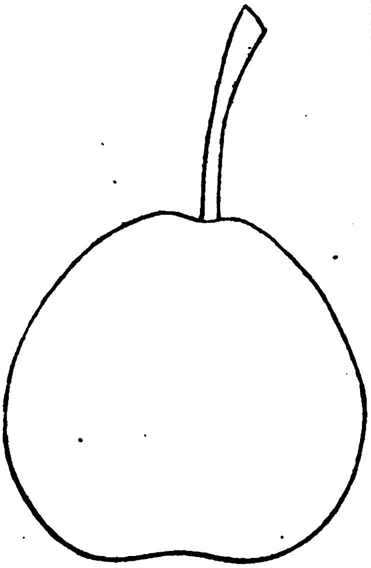
Ripe about the 1st of September, weighs 7 ounces. Flesh rich, juicy, half-melting, high flavored and sweet; of first rate excellence among pears ripe at this season, considering its size and qualities together.



2. Henrietta.

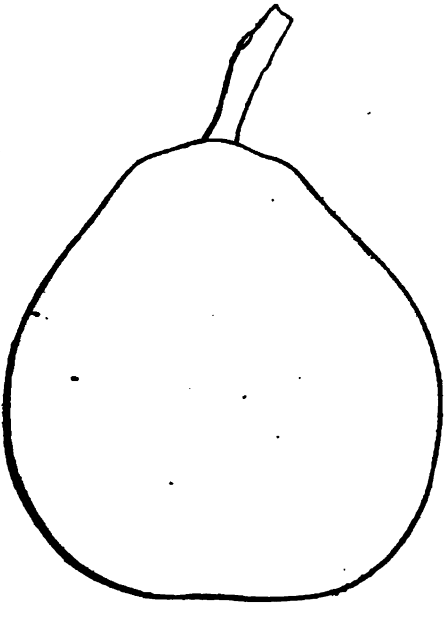
2. HENRIETTA.—Ripe about the first of September, weighs 3½ ounces; color green, with sometimes a coppery blush on the sunny side; juicy, melting, sweet, sub-acid & rich. Skin smooth and form regular. A first rate pear.

3. CITRON. Ripe from 1st to 15th of Septem. weighs 3 to 5 ounces; larger than the Seckel pear; flesh melting, juicy, very sweet and delicious; skin deep green, cheek slightly ruddy next the sun. It does not change color much in ripening, hence it is difficult to know when it is ripe, except by handling. The fruit will be insipid if the tree is too much loaded. For these two reasons, the tree should be kept down so that the fruit can be *thinned* when small, & *felt*, at the time of ripening.—With attention to these circumstances, we may have a pear exquisitely delicious. It does not keep long after it is mellow.



3. Citron.

4. Cantelope.—This is not among the best, but has qualities that are desirable. Ripe, October and November; color lemon yellow; weighs 5 ounces. Fair, round and regular; flesh tender, rather breaking than melting; fine grained, sweet, juicy, but not high flavored. The tree is prone to bear too abundantly. If the fruit is not thinned, it will be almost tasteless. In a hot summer, with few pears on a tree, the fruit will be very fine for the table. But its special excellence consists in being a superior baking pear. It does not decay at the core.

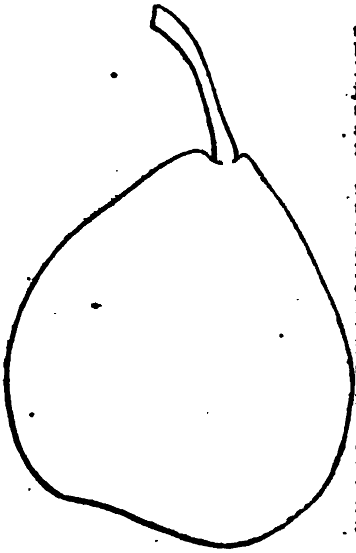


5. Calhoun.

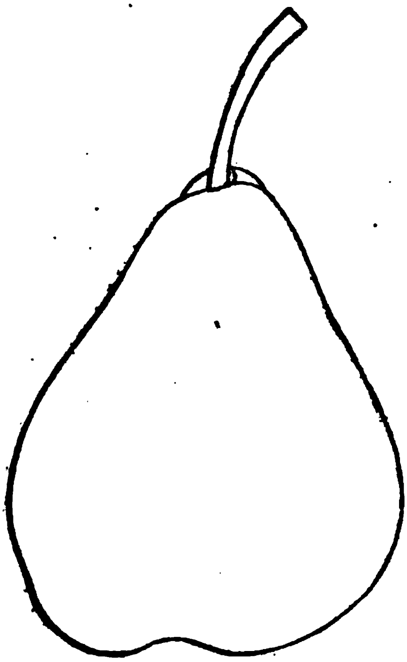
5. Calhoun—Ripe September to November; weighs 4¼ ounces; color greenish yellow, sunny side inclining to orange, with the larger end spattered with russet; flesh sweet, rich, sprightly, and high flavored, scarcely any acid perceptible, very juicy and melting. A first rate pear.

6. Polk.—Came in bearing this last summer; ripe September 1st; about the size of the Citron, above described; resembling in form a Bergamot. Flesh juicy, melting, sub-acid, sweet and rich; quality first rate.

7. Henry. Ripe fore part of September, weighs 2¼ ounces; color green, turning to yellow, with a coppery blush. Flesh juicy, melting and exceedingly rich and sweet; not surpassed by any in richness. It seems inclined to crack; if it recovers from that tendency, it will rank as a first rate pear.



7 Henry.

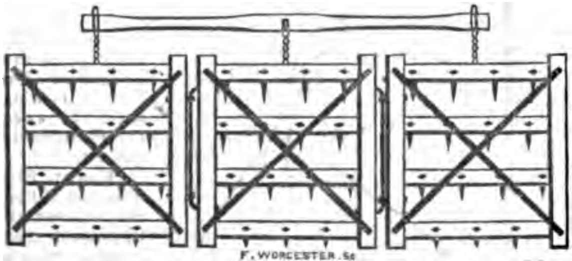


8. William.

8. William.—Ripe about the 1st of September; weighs 3¼ ounces, color pale yellow, dotted with red and brown. Flesh sweet, juicy, melting and rich. A lover of sweet pears would pronounce it first rate.

None of these seedlings are remarkable for their size. In flavor and other desirable qualities, there are five, perhaps seven, varieties that are to be placed in that class of older sorts designated as *first rate, excellent, very fine;* and there are seven that may be classed with those termed *good, fine, superior*. Most of the remaining varieties are better than those commonly cultivated about the country. This experiment has resulted in the production of first rate pears in much larger proportion than is common in the experience of others, including Professor Van Mons; and shows, I think conclusively, *the great advantage of sowing the seeds of the best of pears only,* which was the course pursued by Gov. Edwards.

New-Haven, Ct., Feb. 1845. Noyes Darling.



COMPOUND CENTRE-DRAFT HARROW.—Fig. 60.

Strong, light, convenient and long enduring, covering a space nine feet in width, yet under the easy management of a lad and span of horses, these harrows must supersede the use of all others, for the purpose of seeding grain or grass, on lands cleared from obstruction, and of large extent, performing the operation in one quarter part the time, and with one-fourth the labor.

They are worked in sets of three, but can be separated by unscrewing a couple of bolts, so as to form a pair, or three separate harrows, in a minute or two of time. Each harrow covers a space three feet square; the teeth, 17 in number, are placed in cross bars, so that the harrows follow in straight lines, and not *diagonally*, as is customary, and almost universal. No two teeth follow in the same track; and although placed at nine inches distant in the bar, to permit those clods, which are not broken by the first concussion, to pass through and be operated upon by each succeeding row of teeth, without choking the harrow, yet the interstices will be found to measure two and a half inches only, at regular distances, with the surface of the land as perfectly raked as that of the garden, affording the finest bed for the smallest seeds. The most uneven surface is operated upon by these harrows, the joints permitting them to descend into hollows, and to clasp the elevated portions without lifting, choking, or dragging the soil into heaps; whilst among the remains of vegetable matter, too often left exposed on the surface by badly constructed plows, they make their way, requiring little labor to keep them free, the driver lifting the middle harrow by a line fastened to it, which he carries in his hand for the purpose; and guiding the team by lines fastened to the outside of each bridle, the animals being kept at some distance by a jockey stick, he will have the means of attending to this, as well as seeing that the harrows are kept perfectly square to the work; which is indispensable to their proper performance; for by dragging diagonally, the teeth will be found to follow in the same track.

It is remarkable, that while improvements innumerable have been made in the plow and agricultural implements in general, the harrow has remained the same for ages. In a late visit to the Patent Office in Washington, amidst scores of other models, not a single one of the harrow was to be found, nor did it appear that any had been patented; the worthy Commissioner expressing surprise at the fact. Those in common use, operate by force, and compressing the surface so as to close the pores of the soil, when the pressure of the atmosphere falling on it, it is rendered in a measure impenetrable to the roots of plants, as well as to the fertilizing influences of heaven. The object of the present improvement is, to lighten the soil, after the manner of the garden rake, by which the seeds are covered, and the land pulverized, in a manner quite different from all others; a single tining after the seed is sown, and another, crossing the land, being generally found all-sufficient for every purpose; much however, depending on the manner in which the land has been plowed; but if that has been done by the centre-draft plow of Prouty & Mears, which operates by breaking and pulverising the land, after the manner of the *spade*, the Compound Centre-Draft Harrows will then be found to leave the surface, with the neatness and precision of the *garden rake*—a perfect spade-labor business, which is "the perfection of good husbandry."

Philadelphia, 1845. JAMES PEDDER.

MAKING SUGAR FROM CORN-STALKS.

MR. TUCKER—A short time since I met with Mr. Adams' account of his experiment in manufacturing corn-stalk sugar; undertaken from the inducements offered by the New-York State Ag. Soc., and for which they awarded him a premium of one hundred dollars. I was much interested in its perusal, as it strongly reminded me of the difficulties and discouragements experienced in the earlier stages of the same inquiry, when experiment was the only available source of knowledge to which we could turn for assistance in our exertions. As I have pursued this subject with unabated confidence and reasonable success, since its commencement, my experience may perhaps be useful to Mr. Adams and others engaged in perfecting this important and interesting manufacture.

Before proceeding further, I must find a little fault with your Agricultural Society. Its premium was offered for the "maximum quantity of sugar made from an acre of northern corn." It appears to me that the great object to attain, is a plan by which sugar may be made *profitably*. It is very possible to expend more labor in the manufacture than the article would be worth; such a plan would of course be worthless practically, whatever might be the *amount* produced. Secondly, in planting corn for sugar, I should prefer seed that had ripened in a more southern latitude, as less liable to run to ear early in the season. In raising this crop, the great end to secure, is the perfect growth of the plant in every particular, except in the formation of its seed. No plan ever yet tried has succeeded completely in effecting this object. Those stalks which (from some cause yet unknown) have shown no disposition to form grain, are always far more juicy, and yield a much larger quantity of sugar, than those from which the ear has been removed. As soon as this hitherto accidental condition of the plant is brought by persevering efforts, within our control, I confidently expect that the corn-stalk will not merely rival but exceed the sugar cane in the amount of saccharine matter it will yield. The past season, a small lot of corn was planted in rows three feet apart and about six inches asunder in the row. As soon as the tassels appeared they were pulled out. The result of this experiment was encouraging, but not entirely satisfactory; another lot of corn growing within one hundred yards, was allowed to tassel, and this perhaps caused the partial failure. In order to try this plan fairly, the corn should be grown distant from any other, and the tassels pulled out before any of their pollen has been shed. Very thick planting, in order to prevent earing, is objectionable, as it renders the crop more liable to be prostrated by storms; and the stalks being small, the labor of handling them is increased; they should not be less than one inch in diameter, or about the size of broom handles; the distances in planting in order to produce this size, will vary according to the quality of the soil. Whatever plan is adopted, to prevent earing, it must be attended to, or the sugar of the stalk will be expended in the formation of grain.

When the corn is ripe, (which will happen about the usual time of cutting corn) cut off the tops at the point where the ear generally forms; the leaves on the stalk below this, are few in number and mostly dead; they may be sufficiently removed by simply passing the knife from top to bottom on each side of the stalk. By pursuing this plan, the formidable labor of stripping the stalks, which has been complained of, is greatly lessened, and the whole business put in a practicable shape.

The method of curing "tops and blades" is so well understood by farmers, that nothing need be said about it here. Experience has proved that the extras of this crop, (the tops, blades, crushed stalks, &c.) are worth more, when properly secured, than the whole labor required in growing and manufacturing, provided this labor is economised, in the way pointed out. In the list of plants cultivated for forage, there is not in the whole world, another one that is equal to this in the amount of nutriment, which it contains. It is well worth cultivating for the fodder alone; the stalks therefore cost nothing; every farmer may see from this, how (if he chooses,) to steer clear from his grocery bill.

The mill for grinding, best suited for the farmer, is a simple one, and need not cost more than $10.

The boiling apparatus should consist, 1st, of two defecating kettles; they may be of cast iron, and capable of holding as much juice as the mill will press out in 15 or 20 minutes; these kettles must be placed so that a quick and strong fire can be made under them; and so arranged that they can be emptied at a moment's warning. 2d. Two or three evaporating pans; a single sheet of Russia iron, bent up six inches at the sides and ends, and riveted, makes an excellent pan of this description. 3. Two copper or tin pans for finishing; these should be flat bottomed, six inches deep, and so arranged that they can be removed from the fire instantly when the charge is finished. They should never have much over two inches in depth of syrup placed in them at one time, and should each be of such a size that a charge of three or four gallons will not fill it deeper than this.

The difficulty of manufacturing sugar to the *best advantage*, has always been considerable. This has grown out of the foreign substances always found connected with it in the juices of plants. Sugar is one of the most easily decomposed substances in nature. The juice of a plant may be very rich in sugar, yet when slowly evaporated, the residue will not show a single trace of saccharine. In the process of vegetation, as the plant approaches maturity, sugar is changed into starch. In the germination of the seed, a contrary change occurs, and starch is converted into sugar. I took a portion of sprouted corn, and macerated it in water until the sugar was extracted; the liquid then strikingly resembled both in taste and smell, the juice of corn-stalk after it has been clarified; it was then set to evaporate over a slow fire; it gradually grew darker in color, and in a short time it appeared very much like beet juice. Before the evaporation was finished, every particle of sugar had disappeared, and from being sweet and pleasant to the taste, it had become black, bitter and nauseous. The same experiment was repeated under the same circumstances, except that a small portion of starch was added to the water; in this case, the sugar was not decomposed, but retained its distinctive qualities throughout evaporation. The chemical reasons for this, it is needless now to discuss; the simple fact, and its application, are sufficient for our purpose. Wheat flour consists principally of starch, and was used with good success, though perhaps pure starch would be better. One pint of flour was mixed with two gallons of skim milk, and one pint of this mixture was added to 30 gallons of juice. These proportions are not given as best, for many more experiments will be necessary before they can be determined accurately.

As the juice comes from the mill, it should run into a receiver which will hold just enough to fill one of the defecating kettles; while in this receiver, the mixture of flour and milk, and also the necessary quantity of lime-water must be added and well stirred in. It is then poured at once into the defecating kettle and heat applied; a very firm thick scum is by this means separated, and the juice becomes clear; it is next run through a flannel strainer into one of the evaporating pans, and the boiling kept up briskly. Take a shovel full of red hot coals from the furnace, and after blowing the ashes off, throw them into the pan: as you put in more juice, add more coal, as the pan becomes filled with coal, take out that which has been in longest. From this pan the juice is run in succession through the others, (straining it when convenient,) until it is finished. WM. WEBB.

Wilmington, Del., March 14, 1845.

WESTERN RESERVE MAGAZINE OF AGRICULTURE AND HORTICULTURE.—We have received the first number of a monthly periodical with this title, published at Cleveland, Ohio. The leading character of this number is rather horticultural, and it is illustrated with several cuts of pears, apples, and other fruits. The articles are of a highly creditable character, and well worthy of attention. Among the contributors, we notice the name of Dr. J. P. Kirtland, well known as one of our most able horticultural writers. Edited by F. R. Elliott. Terms, $1 a year.

PRUNING FRUIT TREES.

L. TUCKER, Esq.—Alonzo Gray has written a valuable treatise on agriculture. We have just read it with much pleasure. He advises to prune fruit trees in winter, as many others have done. From our observation, the winter is not the best time for pruning, unless the stocks are immediately covered with liquid grafting salve, or other gummy materials, &c., which may easily be done, if warm and liquid, and put on with a painter's brush. If left uncovered, the stocks become dry, shrink and crack, and let in water, and rot and disease follow.

A neighbor of ours has a few trees of the best kind of apples. He complains that all his trees decay by rot, &c. He trims them every season in February; and scrapes and washes them with great care and labor. All his trees thus decay. We think it is caused by thus trimming in winter.

If trees are trimmed the last of May or first of June, when a plentiful flow of sap is furnished, the stocks heal over soon, or during summer. It is prudent to cover the stocks with salve, as above mentioned, if you would do the work perfectly, which is certainly best.

Schenectady, April, 1845. D. TOMLINSON.

SPONTANEOUS VEGETATION.

MR. TUCKER—I am very far from believing that any condition of the elements, can compel nature into such a violation of her immutable laws, as the transmutation of wheat into chess; yet who can satisfactorily answer the question, *where does the seed chess come from?* I have it from the best authority that an abundant crop of chess has been grown on new land, when the cleanest of wheat has been sown. Some writers have pretended that chess will sometimes remain in the ground many years without vegetating; but our most experienced farmers assert that chess vegetates much more easily than most other seeds; that even red clover seed will remain in the ground much longer without vegetating than chess; yet we never see red clover appear on land where the seed has not been sown.

I would also ask the question, where does the seed of white clover come from? We have it from the best authority, that soon after the trees are cut off from a calcareous virgin soil, white clover invariably appears. A farmer who lives on the Allegany ridge in Pennsylvania, where there is no calcareous soil, informs me that he has tried the experiment of sowing lime and plaster on a patch of ground covered with sorrel, when the sorrel was the next season succeeded by white clover.

When I have seen young oaks growing in the midst of a forest of pine stumps, I have said to myself, where did the acorns come from to grow these oaks; they certainly were not brought here accidentally, because the nearest acorn bearing trees were forty miles off, in a new and sparsely settled country.

It is in perfect accordance with nature's laws, that the oak should follow the pine in the order of succession; most pine bearing soils, being doubtless originally too deficient in alkaline salts, to admit of the growth of the oak and other deciduous trees; but after the soil has been for hundreds of years acquiring carbonic acid, and alkaline matter, through the agency of the incumbent forest, it is sufficiently rich in salts, to admit of the growth of a deciduous vegetation.

But apropos of chess; may we not sometimes refer its presence in the wheat field, to that mysterious principle in nature, which has from the beginning, caused organic matter to spring spontaneously from certain inorganic elements, dependant however for its all subsequent growth and maturity, to the same laws that control, as the French physiologist would say, *the atmosphere of plants.*

Waterloo, N. Y., 1845. S. W.

FRUIT TREES.—An excellent mode for preventing young fruit trees from becoming hide bound and mossy, and for promoting their health and growth, is to take a bucket of soft soap, and apply it with a brush or old cloth to the trunks from top to bottom.—*Boston Cultivator.*

NOTES OF TRAVEL—No. IV.

In Missouri, Kentucky, Tennessee and Missouri.

BY SOLON ROBINSON.

If I mistake not, my last communication closed while we were yet in the lead region of Missouri, and as I wish to keep up a continuous narrative of all our wanderings, I shall take up the yarn as near as possible where it was last broken off, which I think was the 29th of January.

On the 29th, I passed through the town of Farmington, the name of which for once, intimates something of the country around it. During the morning ride, the road continued over the same description of hilly poor land that it had for several previous days, and the appearance of the inhabitants corresponding with the country. But in the vicinity of this town, the land is good, but the dwellers therein lack the go-ahead spirit always observable around a settlement composed of "down-easters." I observed but little good stock of any kind, though from the appearance of the old orchards, it is evident that somebody had been a long time here—not long enough however to trim the fruit trees. In fact, while speaking of this, I find a great many persons who contend that peach trees are better without trimming. Of this, I cannot say, but I certainly shall continue to trim mine, commencing in the nursery.

I don't know but I mentioned before, that the red unctuous clay that is found with the lead, appears to be conducive to the healthy growth of fruit trees. Who can tell what is the fertilising quality it contains? The appearance of wheat still continues unpromising—and mills few and far between.

It may interest some of your readers who keep a memorandum of the weather, that I should give occasional notes of the state of it at different times and places, so that by reference, they can make comparisons. This then, has been a fine sunny day, and mud fast drying up.

Jan. 30, I passed Mine-la-Motte, situated in Madison county, the oldest worked lead mines in the United States. A tract of land, I believe 3 miles by 6, is owned, or rather held under a somewhat doubtful title, (the claim being disputed by the heirs of Reno, who was here in 1723,) by a company who lease out the right of mining for one-tenth of all the ore dug, and also the privilege of buying all the miner's ore at a given price. Notwithstanding these terms are considered hard by the miners, there appears to be a large number of them engaged, and some eight or ten smelting furnaces in operation, and two erecting for copper, which is also found here. Cobalt, manganese and nickel, are also found, but not worked. The land looks as poor as poverty, and shows but little cultivation, and that of a corresponding quality, and if I may judge from the appearance of the miserable little block log cabins, and squalid children, the whole population would be far better off if they were settled upon some of the thousands of uncultivated acres of rich prairie lying waste within a few day's journey of their present abode. Much of the lead ore here found, is what is termed "dry bone mineral," and is intimately mixed with the dirt overlying the blue ore. To prepare it for smelting, it is taken up, dirt and all, and hauled in ox-carts to a stream, where, in a place fixed for the purpose, the dirt is washed out by a somewhat tedious operation. It also requires a different and hotter furnace to smelt it than the blue mineral. Until within five or six years it has been considered worthless. It now yields about 55 per cent of lead. What vast quantities of "dry bones" are still thrown away by farmers as worthless; and if they would not yield 55 per cent on the labor necessary to prepare them for manure, they are still too valuable to be thrown away.

After leaving this last mining tract, and passing over a few miles of equally poor land, we came to Frederickton, the county seat of Madison, around which is some excellent land, and I am sorry that I cannot apply the same term to its cultivation; but I must speak of things as they are, and not as I would like to see them. Here it was my intention to have taken a route leading into Arkansas, but finding that to do so I must make a long detour to the south-west, on account of impassable swamps that would lay between me and the Mississippi; I took the road to Jackson, and passed over about forty miles of as miserable country, as one seeking after such a tract, could wish to find. It is very hilly, some of which are covered with pitch pine, and only along the banks of the streams are found a few settlers, who with few exceptions, it may be said, rather stay than live. After passing a long, lonely road, from the few houses upon which, it seemed as though the inhabitants had died or runaway, I arrived long after dark, at a place where I had been told I should find the only "house of entertainment" upon the road. * * *

"And would'nt I like something warm and good for supper?" asked my landlady—I certainly should—and it length it came. Oh ye epicureans, what a treat! Wild turkey and venison, say you—a right new country supper? I can almost hear your lips smack now But let me tell you, the supper consisted of seven small pieces of pork ribs for four persons, and a "power" of very coarse corn bread, and some muddy looking warm water called coffee, free from any adulteration of cream and sugar, and no other eatable thing on the table. And of this I eat, not having then seen the kitchen, which I afterwards did; and the negro cook. *I did'nt stop for breakfast*, though I did for lodging, and slept quite comfortably under my two buffalo skins; but in the morning, although I stopped at the "stage-house" for breakfast, the only improvement was, that had I been compelled, for want of food to "kiss the cook," it would have been altogether more agreeable than the evening before. If possible, the house was worse. It is an old saying that "one half the world don't know how the other half live." I wish they did. I think they would be more contented and grumble less. And I wish the other half knew how they lived themselves; I think they would live better. In truth, I think it would be beneficial to us all to know a little more how the other half of the world live, and by comparing the situation of others by our own, try to improve.

But I must leave moralising over poor suppers and worse breakfasts, and jump over these poor hills and down along the banks of a stream whose waters look as though somebody had spilt their milk in them, and when within a mile of Jackson, the county seat of Cape Girardeau, we seem to strike an entirely different region of land; and the first good looking place after leaving the hills, I find belongs to a Mr. Criddle, an old Virginia tobacco planter, who is very successful here, and has of his last year crop now on hand, about 40,000 lbs. He, as well as many other subscribers, would like the Cultivator to give a price current of several leading articles in several eastern cities. Mr. Criddle's land is rolling, yellowish clayey soil, and produces hemp as well as tobacco.

The town of Jackson is on a hilly location; 12 miles from the river and contains several good buildings; the court-house, bank, &c., and has a land office, in one of the officers of which, Mr. Davis, I found a very warm friend of agricultural improvement, and through his assistance and information, some dozen of the spirited and intelligent gentlemen of this town became subscribers to the Cultivator. If the U. S. government had the same liberal views that this one of her officers has, they would not only graduate the public land to a grade that it would sell at, but much of the land that I have passed over between here and St. Louis, they would give away to whoever would take it, and be well rid of it at that. Indeed, as much as Missouri has been boasted of for richness of soil, it is a fact that many do not seem to be aware of, that the south half of the State contains vast tracts of mountainous barren soil that is scarcely inhabitable, and will undoubtedly so remain for a long time. True, it has great mineral wealth. The celebrated "iron mountain" lies only a few miles west of the route I traveled, and although only some 40 or 50 miles from the Missouri river, yet the impediments in the way of making an easy mode of transporting this richest of all iron ore in the known world, has hitherto kept it in the deep forest buried. And our government is not one to lend much aid to those who buy her lands, whether to improve the science of agriculture or develop mineral wealth. But let us jog on. Though before I leave Jackson, let me say that from experiment of several of the citizens, they find the valley land best for orchards, and old rotten wood the best manure. The hill land appears too dry in summer. I have noticed several orchards that were planted by the French, that are 40 or 50 years old—and don't look as though they had been trimmed in all that time. The question is often asked me, "should orchards be cultivated in other crops?" I answer yes, always, until the trees get big enough to take care of themselves. Grass is injurious to young trees; though for the matter of that, I don't think it is likely to injure them in this part of Missouri; there is not enough raised to injure any thing. Wheat still looks poor—has the appearance of having just come up.

From Jackson, I traveled the "dividing ridge;" all the waters to the north and west, instead of running toward the Missouri, run away from it and spread out in the swamps of Arkansas. After leaving the ridge about a dozen miles from Jackson, we have a swamp five miles across, through which the water run ten feet deep during the high water of last summer, not finding its way back again to the river until it had wended its way perhaps 200 miles through the swamps. This water leaves the river a few miles below Cape Girardeau, in consequence of the high bank that formerly kept it in its channel, having been washed away during the last season, proving very injurious to many who found themselves suddenly in possession of a new water power upon their farms—rather an uncontrolable one to be sure—that instead of serving to grind their corn, served them with notice that they could not have any to grind.

Across this swamp the road is partly through, not over, a very soft black soil, and partly over a raised causeway only 8 feet wide, and upon which, if two wagons were to meet, I suppose one would have to drive *over* the other, as there is but one chance in several miles to drive round.

From here to Benton, the land improves, and there are some good farms; those of Mr. Hutson and Mr. Allen, clerk of the county of Scott, being the best in appearance. Crops, corn and tobacco. Benton is a town that would not do much honor to the gentleman for whose honor it was named. * * * Although it was night, I hurried past the town, and out to a farm house, where I felt much more comfortable. Here I found plenty of corn, and about 40 head of horses to consume it, and of a breed very common in this part of the State, which I wish I could give you an accurate idea of. They are generally light sorrel, with white face and feet, about 16 hands high, with legs bigger than a deer, that support a body in proportion to the legs. In winter they run in "the lot," and eat corn out of a hollow log, and in summer they run wherever they can to get away from the hordes of flies and musquitoes that infest the swamp where they are sent to "range for themselves." The cattle in this part of the State are of the same order, and kept in the same manner. Now corn is an excellent rich grain to make pork, but if it is suitable food to manafacture bone and muscle from for young stock, then Professor Johnston and many others know nothing about science. It is however a fact that where the most corn is fed and little else, there I find the "scrub breed" in the highest state of scrubbiness.

At this last stopping place, I found some excellent sweet potatoes, *the first vegetable that I have seen upon the table since I left St. Louis;* and the owner assures me that the whole secret in keeping sweet potatoes is to keep them *dry and warm*. Mind, warm—not hot. He packs them in sun dried sand. This section of country still shows the marks of the earthquakes of 1811. In fact, there have been slight shocks every winter since—sometimes the earth cracks open and blows out quantities of sand.

Feb. 2, which, bear in mind, was the first Sunday, was a mild, clear, pleasant day, here in Missouri, a few miles west of the mouth of the Ohio river. How was it with you, reader?

This day in a 20 mile drive over mostly poor sandy black oak barrens, and across a small sandy level prairie, I passed through a couple of miles of Cypress swamp, along a road the like of which would be a curiosity in any civilized country. I do not blame the inhabitants here for not making a better road, for if I may judge from their looks, they will soon need to travel but a short road, and that upon a conveyance that never jolts the rider. Although much of this county is very rich, and produces great crops of corn and some wheat, yet there is so much swamp that it is decidedly sickly.

On Monday, and in a dull, gloomy and rainy day, I had to drag through 14 miles more of swamp and overflowing land to reach the Missouri; and this is the only road by which half the inhabitants can reach Benton, their county seat. And over this same road, the emigrants from Kentucky, Tennessee, &c., going to Missouri and Arkansas, have to drag their loads of "plunder." I met many of them in wagons, in North Carolina carts, and on pack horses—the latter being generally packed with a most liberal supply of children and their mothers—"I reckon"—and as it "takes all sorts of folks to make a world," I am constrained to think that some of those I met are some of the "all sorts." "The ladies" in particular, riding in a very primitive way, such as was common before the invention of side-saddles, looked a good deal "sorter like" the coarse filling with which the great western web of wilderness is woven.

After a toilsome day's work of 18 miles, I was under the necessity of stopping 2 miles short of the ferry at the "iron banks," where I was to cross the Missouri. It had been my intention to have gone from Benton to New Madrid, by which I should have avoided these 16 miles of swamp, but I learned that if I crossed at New Madrid, that I should be caught in a trap in a district of country lying between there and Memphis, that is known as the "shakes," from having been shaken by earthquakes into sundry very uninteresting goose ponds. And from New Madrid down on the Arkansas side to opposite Memphis, there is "no road nor nothing." The only good highway—high enough sometimes—in the country, is the Missouri, but not a very good carriage road.

WHEAT CULTURE.

At one of the weekly agricultural meetings held during the past winter, the subject of discussion was the culture of wheat. Mr. McVean, member of the Assembly from Monroe county, made some very interesting and valuable remarks, which, at our request, he has furnished us for publication.

In offering a few remarks, said Mr. McVean, on the cultivation of wheat, I deem it most proper,—deferring the minor details of special cultivation, manures, diseases, and different varieties,—to introduce the subject by an exposition of the general principles and circumstances of soil, natural adaptation and climate, which will ever control the production of this most important crop.

An examination of the geological map of the State, will at once and most readily indicate to the intelligent observer, what portions of the State are most naturally adapted to wheat.

First in value, and occupying a large surface, is the Onondaga salt group. The rocks of this group are sometimes denominated the gypseous limestone, or shales; connected with which, are the plaster quarries, the water lime, and the salines of the State. This group, as a whole, embraces the most natural and enduring wheat soil of the State. It includes, and extends from Grand Island eastward, narrowing to a point in the county of Scoharie. Its soil is composed of diluvial swells, chiefly resulting from and based upon the limestone—a subsoil, susceptible of fertility at any depth, and which, with the substratum of lime rock, is adapted to absorb the superabundant moisture. Hard water, a prevalent growth of oak timber, also upon much of its southern line a comparative absence of vegetable accumulation, and often of timber, consequent upon the annual burning of its natural product the opening grass, characterize this group. With a surface at once beautiful and accessible, few portions of the State presented a more unpromising *appearance of soil* to the first settler. Its unsurpassed and permanent value has been demonstrated by time and experience, and it is due to the mineral character of its soil, and the fertility and adaptation of the subsoil.

Although I have dwelt on this group more at large, because of its natural peculiarities, I am far from claiming for it exclusive natural adaptation to wheat; and only mean to say that it is more generally and permanently so adapted than any other, as a whole—that as a whole, it is more certain and enduring; and better resists every unfavorable vicissitude of season, climate, or defective cultivation; and that under continued cultivation, there has been little, if any falling off, in its annual product of wheat, except when managed with great imprudence.

I am aware that there are large portions of superior wheat soil embraced in the collateral geological groups, very much of which is but little, if at all, inferior to the above, in natural adaptation to wheat.

Of these, extending north to lake Ontario, are the Niagara, Clinton and Medina groups; and towards the south, the Helderberg, Hamilton, and of the Chemung group, more or less of the northern portion, according to the extent of the northern lime drift; for it is an important fact that the diluvial current from the north, has conveyed and intermixed beneficially, the rock of each of these groups with all the others; conveying the fertilizing lime far south of the actual existence of the rock, in place. These various groups contain collectively a very large portion, perhaps one-fourth, and the most valuable soil of the State.

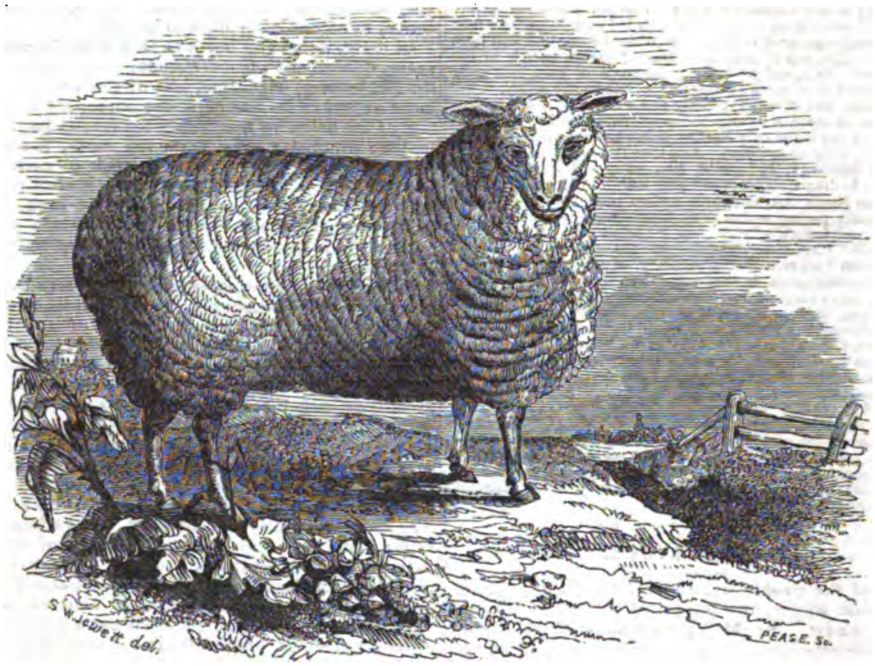
When the important question arises, where have occurred, and to what causes are due, the evident and conceded diminution of the wheat crop of the State? it will be found that it has occurred chiefly, in the last mentioned groups; and generally in the ratio of their distance from the first; owing, in some instances, to the deficiency of lime, deficient mineral qualities, and excess of vegetable matter and humus in the soil; very frequently to the too level and wet surface; but more specially and injuriously, to the tenacity and imperfection of the subsoil; resisting the escape of the superabundant moisture, whereby large surfaces are often supersaturated with water; inducing winter kill, debility, and various diseases of the plant, especially under the action of sudden and extreme frost, or heat and drouth. Collectively, these results become more manifest and injurious as the soil has been retained under long continued cultivation, so that only in the most favorable seasons can a full crop be realized in much of these soils; and in these have occurred the principal falling off in the wheat product of the State.

As there are large portions of soil thus circumstanced, in the wheat region of the State, and especially in the last named groups, it follows, if the premises are correct, that in no way can the area of wheat growing be so advantageously extended, in no way can capital and means be so profitably applied, as in improving and adapting these lands, by open and thorough draining, where the mineral qualities of the soil are in other respects proper. It is an indisputable fact, that very large surfaces under cultivation, scarcely yield a remunerating return, from the causes here indicated.

In further illustration, and in order to a more comprehensive view of the whole subject as connected with the above general principles, I desire to remark briefly upon the influence of climate upon the production of wheat, as I am not aware that the importance of the subject is generally appreciated.

Perhaps there is not on earth a better wheat soil, than is to be found in New-York; so far as the natural capability of the soil is concerned; and yet it is only when the most favorable circumstances of season and temperature combine with a proper condition of the soil, that we obtain products approaching those of Great Britain, from lands under no better cultivation, and inferior in natural adaptation to ours. The cause of this is to be found in the excessive character of our climate. Our growing crop has to surmount the extreme severity of our winter, and the more injurious and frequent spring frosts, acting upon a wet surface, producing what is called winter kill. The succeeding heat and drouth, acting with sudden change on the same wet surface, upon a plant flourishing only in a dry soil, and naturally incapable of resisting these adverse conditions. And finally, encountering the excessive heats of summer, (often in connection with moisture,) stimulating the plant to premature and diseased ripeness. Or, if the foliage is very dense, enfeebling and lodging it, so that the grain is deficient in proportion to the straw. It is a frequent occurrence, that the crop is heavier than can be carried to profitable maturity, under the influence of our climate; and practical farmers have long since learned that crops of a medium weight are generally the most profitable.

These influences of climate apply not only to this State, but with more or less injurious force, to all the United States, in one extreme or the other of heat or cold; and it is probable, that in the south-western States of the Union, the cultivation of wheat is limited, more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LEICESTER EWE—(Fig. 61.)

The above is a good portrait of a Leicester ewe, about one year old, belonging to **Paris Fletcher**, Esq. of Bridport, Vermont. She is descended from the stock of Mr. S. Norton, of Greenwich, N. Y. She is a large, well formed, and very heavy fleeced animal, and will, in the opinion of competent judges, give at least eight pounds of washed wool, at her first shearing. Mr. Fletcher has at present but a few sheep of this blood, but those he has, have proved so valuable, that he is determined to increase the number. He has a fine and very neatly managed farm, well calculated for supporting the finest cattle and sheep.

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by the influences of climate, than by imperfections of soil.

In accordance with the above principles, and for the reasons assigned, it will be always practicable in equal, or even inferior conditions of the soil, to raise heavier crops, where the climate is more temperate and uniform; for the reason, in addition to those stated, that the crop occupies the soil a much longer time in arriving at maturity, and is also less subject to the adverse vicissitudes and influences alluded to. This is believed to be the case in some parts of Europe and in Great Britain, in which last, the crop generally occupies the soil, in a growing state, excluding the fall and winter, from the first of March to the middle of August; but doubtless its insular position has a favorable influence. In such climates also, it is more practicable, for the same reasons, to carry down the cultivation of wheat, to soils of inferior or natural adaptation.

As the influence of climate is a fixed condition, and little subject to human agency, our alternative is to adapt our soil to the climate; and this we may do, chiefly, by laying the land dry, and obviating on a large extent of our soil, the injurious effects of superabundant moisture.

In clearing new land, the importance and economy of retaining, or even planting, at proper intervals, narrow belts of timber, as protection against the winter winds, will engage the attention of practical men. The white oak, which retains its leaves through the winter, is admirably suited for this purpose, and indigenous to the soil.

In continuation, it may be remarked, that the winter frost, and the heat and drouth of our summers, while offering superior advantages for cultivating and subduing the fallows, affect injuriously at the same time the growing crop, especially in wet and heavy soils; urging their drainage also from the consideration that they are afterwards more easily and seasonably tilled, and more productive of all other crops as well as wheat.

The additional conclusions resulting from these general views and principles, are—that the first requisite, in the cultivation of wheat, is to obtain a good soil—that a good soil is one that abounds in lime, is clean and dry, and right in the mixture and quality of its mineral matter, including fertility and absorbent qualities of the subsoil—that a soil containing vegetable fibre or humus in excess produces much straw and little grain, and that consequently alluvial soils are not well adapted to wheat except when naturally overlaid by a proper mixture of the neighboring upland minerals—that there is much unprofitable application of labor and capital, because of nonconformity to the natural laws of soil and climate—that the cultivation of wheat may be profitably continued or extended on large portions of our land, by adapting the soil to the climate, and thus to the cultivation of wheat, on lands that are too level or wet, provided the mineral qualities of the soil are proper in other respects.

I would finally offer the suggestion to practical men, that as good wheat soils are well adapted to the production of nutritious pasturage, it will be found most profitable at the relative prices of products and labor, to renovate the soil to a greater extent than is now practiced, by rendering pasturage accessary to the cultivation of wheat, in preference to costly or artificial manures, beyond a judicious economy and application of those that accumulate on the farm; and that lands not natural to wheat will be most profitably applied to other crops.

Celery for Ducks.—A writer in the Buffalo National Pilot, says—"The common duck of the poultry yard, if fed—while fattening—copiously upon the tops of the celery plant, will attain a juiciness and a flavor that must call forth unqualified approbation from every epicure. It is the wild celery plant that gives peculiarity of enchantment to the canvass-back, and the common celery top will add a charm to the duck of the yard, that cannot be conceived. You cannot make a tame bird equal one with the wild flavor of freedom and foreign travel, but still you can refine on poultry."

GRADE STOCK.

The attention of the public has often been called to herds of *pure bred* cattle, in different parts of the country, and their pedigrees given to the readers of agricultural papers, in such a manner as to add greatly to their reputation in public estimation. We perhaps think as much of pedigree as any one, and would be glad if every stock grower would keep an exact register of all his stock, with their origin, &c. Notwithstanding these views, we think that many of our best herds of stock have been overlooked, and their merits not duly appreciated, simply for the reason that an exact pedigree cannot be given to the public. If we mistake not, some of the best cows for milk of which we have record, have been produced by a cross between pure bulls of some of our best breeds, and the common cows of the country. Indeed, we have sometimes thought, where the object is to raise cows for the dairy mainly, no better course can be adopted, than to select from our best common cows, and breed to a bull of some one of the improved breeds; and although we might have a choice between the different breeds, we would not hesitate to commence with a bull of either, rather than rely entirely on native stock.

One of the best herds of grade cattle, and particularly of grade cows, with which we have ever been acquainted, was raised by Mr. F. Ingersall, of Vernon, Oneida co. This stock, about thirty in number, was last fall sold at auction, (the owner having previously sold his farm,) so that nearly all have passed into other hands, and are now owned by different individuals, mainly in Oneida co. Four or five individuals only have been retained, from the choicest of his stock.

Of the origin of this stock, we cannot speak with entire certainty. They are, however, a cross between the Devons from the stock of Messrs. Hurlburt, of Connecticut, and a race of cattle which have for years gone by the name of the Sweet breed; probably from the fact that a gentleman of that name, in Onondaga co., bred up a fine stock of cattle; but of their pedigree, we are not now informed. Probably there are persons in the counties of Onondaga and Cortland who can give some information in regard to this race of cattle.

Several of the heifers raised by Mr. Ingersoll have proved extraordinary milkers, and fortunately we have here what is too often neglected, exact accounts of the quantity of milk in pounds, given by several of these for many days in succession. From the records of the Oneida Co. Ag. Society, we glean the following facts:

"Nellee," four years old last spring, came in at two years old, and gave an average of a fraction over forty pounds of milk per day, for fourteen days in succession, commencing 1st June, 1842. In 1843, when three years old, she gave for thirty days in succession, commencing May 15th, forty-four pounds four ounces per day. In the summer of 1844, again commenced weighing her milk, but after a few days, owing to a temporary injury, the account was discontinued. The average for the four days it was weighed, was fifty-one pounds.

This cow has taken the first premium in the class in which she was exhibited, for four years in succession, at the Oneida Co. Ag. Fair, where the competition was by no means limited, and where she has had to compete with many of the best animals in this section of the State.

"Blossom," own sister to Nellee, three years old last spring, also came in at two years old, and has proved scarcely inferior to Nellee as a milker. She gave at two years old an average of forty pounds per day, for seven days in succession; and in 1844, at three years old, forty-three pounds and thirteen ounces per day, for the same time. She also has received three first premiums, with spirited competition.

Several others from the same stock have nearly equaled these; and as a herd, they have perhaps seldom been excelled for dairy purposes. Nothing but grass has ever been fed in summer, and never more than four quarts of bran per day in winter.

These facts are given, because we have here exactness and figures instead of guess work, as is too often the case. It is proper to remark, that the milk is of excellent quality; but as they have been kept in a dairy for making cheese, their milk could not be conveniently set for butter separate from the rest of the dairy. These animals are three-fourths Devon, and the remainder from the Sweet stock spoken of above.

To individuals who have bred such animals, and who have taken pains to furnish exact data when exhibited at our Cattle Shows, the public are indebted for an example well worthy of imitation. Shall we not hear from other herds equally successful? "Nellee," spoken of above, is now owned by the writer, who considers her one of the best milkers which has come under his notice; but from the fact that she is kept as a family cow, he will be unable to continue the experiments as he would desire, and especially to test her qualities for butter making. The mother of these animals, "Cherry," is also in our hands, and shows good evidence of dairy qualities, as well as proof in her calves of her value as a breeder.

Rome, N. Y., 1845. E. Comstock.

M'CORMICK'S REAPING MACHINE.

L. Tucker, Esq.—Being a subscriber to your valuable and extensively circulated journal, not having troubled you hitherto with communications of this or *any other sort*; and not having observed much notice taken in the Cultivator of "M'Cormick's Virginia Reaper," I have supposed it might not be uninteresting to the readers of the same, nor unacceptable to you, to give some account of what it is doing here in the "far west."

I am not a practical farmer as yet, *but I expect to be one soon*. I have long felt a deep and lively interest in the agricultural prosperity of our common country, and have acted some humble part towards promoting this great cause, within the limited sphere of my influence. In this age of improvement, nothing has come under my observation, which promises greater benefit to the farming community, than does this most valuable invention, the Virginia Reaper. After hazarding this opinion, be not surprised when I say, that I have not yet, even witnessed the operation of the machine in the field. I rely mainly upon the HUNDREDS of gentlemen, (many of them personally and intimately known to me,) who during the last three or four years, have in my native State, Virginia, borne testimony of the most conclusive character to the fact. Many of them, as I have seen, after trying one machine through a harvest, stated that it had paid for itself, and supported their statements with orders for additional machines. This was the case with a brother-in-law of mine, Wm. Galt, Esq. of Glenarvon, Fluvanna Co. Va.

It is worthy of remark too, that this machine has not been brought forward and introduced on the humbugging plan. Although invented and publicly exhibited in operation in the harvest of 1831, (two years before Hussey's machine was invented,) as appears from a letter published by Mr. McCormick in the May number of the Mechanic's Magazine for 1834, he (McCormick,) did not attempt to introduce it until the year 1840; since which time, it has been rapidly working its way to public favor in Virginia. It had not been taken out of that State until last harvest, when it was introduced into the western part of New-York, into Michigan, Wiconsin, Illinois and Missouri, with the most signal success. A machine was also sent to this State, but arrived too late for harvest; it was exhibited at the annual fair of our County Agricultural Society, and received a certificate and special report from the committee on Agricultural Implements.

McCormick's Reaper, is now, I understand, being manufactured in the western part of New-York, (by Backus, Fitch & Co. at Brockport, in Monroe county,) in Michigan, Wisconsin, and Missouri, and I learn from Mr. A. C. Brown of this city, one of the most extensive machine builders in the west, that he will have at least one hundred and fifty machines manufactured for the ensuing harvest, for which he is receiving orders by almost every mail. Twenty-five orders have been received by him from a single county in the State of Indiana.

The terms too, upon which the Reaper is offered, are at once generous and confiding, and bespeak a favorable consideration from the agricultural community. It is "warranted to cut fifteen acres per day with ease, (light two horse draft,) to save an average of a bushel of wheat to the acre which would be lost by ordinary cradling, and to be strong and durable—not subject to get out of order," and is sold on a credit, giving time and opportunity to test it before payment is made, at the low price of one hundred dollars.

Of the large number of certificates from Virginia, I herein enclose three or four, which it might be well to append to this, if you can allow it so much space.

Very respectfully, yours, WM. H. H. TAYLOR.

Post Office, Cincinnati, May 16, 1845.

We give the substance of the certificates which accompanied the above:

Mr. E. FLETCHER, Lynchburg, Va. says—"During wheat and oat harvest I used it some fifteen days without any difficulty. It cut uniformly, clean, and well, on an average, without pushing, from fourteen to sixteen acres a day. One day, when a little more activity was used, it cut twenty acres. Where the wheat or oats were tangled and fallen down, with a little care it cut and saved the grain admirably well. Many of the best farmers in the neighborhood of my plantation, near Amherst Court-House, came to see its performance; all were highly gratified, and many would linger and follow it round the field to admire and witness its neat, rapid and perfect performance. I think it would not be going too far to say that it is a perfect machine of the kind, and that no farmer whose plantation is clear of stumps and stones, (for it does not much matter that the land be rolling,) and raises wheat or oats to any extent, should throw by his reap-hoops and cradles, and make use of your Reaper to save his grain."

Mr. ROBERT IVES of Oak Ridge, Va., says he was so well pleased with it, that he had ordered a second one.

Mr. WASHINGTON SWOAP of Augusta county, Va., says that "in cutting 100 acres of good wheat, when the labor and grain saved are fairly estimated, it will pay for itself."

Mr. WM. GALT of Glenarvon, Va., says—"I have used it in cutting my low ground wheat, and it has performed to my entire satisfaction. I did not measure any one day's cutting, but am perfectly convinced that it will do the work of not less than 10 cradles, and cuts the wheat very clean. I am so well satisfied with the performance of this, that I will take another machine from you for next harvest."

PEACH TREES, CHERRY TREES, &c.

MR. TUCKER—If the following suggestions, relative to the cultivation of the peach tree, as well as some other trees, should be thought worthy of a place in the Cultivator, others may receive the same benefit which the the writer has, from the method here suggested.

The seedlings of the peach are found in almost every garden; and, in too many, they are left to take their chance to live or die, according to circumstances. If a few of these are not destroyed by the hoe, as incumbrances, and a few are permitted to escape, the cold winters of the North hasten on to complete the work of destruction, by killing down a large proportion of the growth.

From his own experiments, the writer can recommend the following method of obtaining and preserving these precious trees: he gathers all the stones that come in his way in peach time, and in the autumn wraps them in a paper or rag, and buries them a few inches in the ground, in any convenient place. Over them he lays a flat stone to denote their position and to preserve them from the digging of ferrets. As the warm weather approaches in the spring, he uncovers them and finds them in a state easily to be cracked. The seed is then taken from the shell, and planted in such places as are convenient for their cultivation. They will then come forward early, and furnish a growth according to soil and care bestowed.

Then, to preserve them in their entire growth from the winter's cold, each tree is in the fall taken up, with with such care as to preserve, if possible, every fibrous root, and placed in a cellar for the winter, with common garden earth thrown over their roots. Here they stand protected, fresh and green, till spring, with not a limb or bud injured by the cold. As the season for transplanting comes on, they are easily transplanted in any place selected for their future location.

The hint to this method of preservation, was derived from the experience of the writer in the winter preservation of the mulberry.

The cherry, apple, pear, &c., though not killed by winter, may be greatly benefitted by this kind treatment, while seedlings.

In mellow soils, the labor is a mere trifle, with those who learn to preserve their trees. But to do the thing *right*, care should be taken not to pull up the trees by a force which will leave half their best roots in the ground. Let the ground be thoroughly loosened by an iron bar, till every root may be obtained. No spade or shovel should be used in this work, inasmuch as either of these tools will cut off many of the best and most fibrous parts of the roots. Much has been written about digging large holes for the reception of trees, and *well* written, too; but if *all* the roots of a tree are taken up with it, we can assure him who transplants it, that he will have no small trench to dig. No tree should be transplanted without its roots, unless you wish to be in doubt two years whether or not "it will make a live of it." For this reason, the *younger* the tree to be transplanted, the better, because you can secure a greater proportion of its roots. Some people enter a nursery and select the *largest* trees; whereas, they would get fruit sooner by selecting only those whose *roots* they could carry with them. Long roots *must* have, and short roots *need* to have, wide holes.

I am well pleased with the management of peach trees, recommended by "C. D.," in your June number; he is right. Too rapid a growth will subject any thing to a rapid decay. The multicaulis grown slowly in a poor soil, will resist the winter. The peach grown rapidly, usually loses half its growth by winter's cold; and its liability to disease is strongly argued from the analogies of nature. I would only give it a good chance in a gravelly soil, decently cultivated. It is said that the *red* varieties are less liable to the disease than the yellow.

P.

Prospect, Ct., January 20, 1845.

SOWING CORN AND OATS FOR FODDER.

LUTHER TUCKER, Esq.—There is no way in which the writer spends a dollar per annum more satisfactorily than in subscribing to the Cultivator. It is not necessary a practical farmer should immediately act upon every suggested improvement in farm management. He has to examine whether the change recommended is suited to his location and circumstances; ever bearing in mind that the great object of the agriculturist, is the *profitable* occupation of his time and capital, and that he may even "buy gold too dear."

With these considerations before him, the writer has for some years read the Cultivator with interest, and (although on a small farm,) derived considerable advantage from the hints of your more experienced correspondents.

During the past winter, by an economical arrangement of his stock yards, and occupying time unsuited to other purposes, he has been enabled to haul out upwards of 200 cart loads of manure more than in any previous year, which if brought from the neighboring city would have cost in the article and labor as many dollars; and in the management of his future crops he hopes to derive additional advantage.

If the limited experience of the writer should be worth a place in your journal, he proposes occasionally furnishing you with a short article without further introduction. And first, in reference to broad cast corn. Having sufficiently proved its value, he determined in the present year to secure a good supply for cutting green, or curing as occasion may require. On the 5th of April, he had an acre of ground plowed and harrowed, then spread over it 20 cart loads of cow manure mixed with the leaves used for bedding, and sowed four bushels of corn and one of oats, which with the manure, were well harrowed in, and rolled; the seed came up well, and when about three inches high, had two bushels of plaster spread over it; it now gives every appearance for a fine crop. He has since sown a second acre in the same way, which is just above ground, and intends in a few weeks to provide a succession.

In preceding years the writer has been much troubled with his neighbor's pigeons and poultry. He this year soaked his corn 12 hours in the liquor from his cow stable, then drained it and well mixed it with plaster; this proved an effectual remedy, as even the few scattered grains left on the surface of the ground after harrowing, remain untouched.

The writer proposes in his next, to give the simple process by which he increased his stock of manure the past winter, and by which he hopes to secure a still further supply during the present year. WOODSIDE.

Maryland, May 12, 1845.

A FEW WORDS ON RAISING POULTRY.

MR. EDITOR—Every farmer who is acquainted with poultry-raising, know show extremely hard it is to raise young turkeys, and young poultry of any kind. In the early seasons of the year, fowls, ducks, and turkeys, are in the want of salt, more or less. Early in the spring of 1840, I got a few duck's eggs, of Judge Spencer, (the large white kind,) and raised five, (four ducks and one drake,) which I kept through the winter in a warm hen-house, and fed them with corn and Indian meal. They commenced laying very early; I had twelve turkeys at the same time; and as the hens commenced setting, I set them with duck's eggs, allowing from 10 to 15 eggs for each hen, and as fast as they came forth, I shut the hens in coops, and put the coops on the edge of a pond in the yard, where I kept my fowls; I allowed the young ducks to stay with the hen until they were three weeks old, and then took the hen from them, and allowed the ducks to remain; and in a few days, the hens commenced laying. In feeding, I commenced with Indian meal and white sea-sand, which contains salt sufficient for poultry; taking about one quart of meal to one gill of sand, and continued feeding that three times a week until they are completely feathered. I found that my ducks were larger and in better order than any of my neighbors. I did not lose a single one by sickness, and raised 90 from the 4 ducks; and by having hens sufficient, there can be 150 raised from 4 ducks. I would advise all farmers and poultry raisers to pursue the same method, and not allow their old ducks to hatch at all; and feed in the same way turkies and chickens, and they will find that they will do better than on any other food.

BURGESS WANDS.

TRANSMUTATION OF GRAIN.

MR. EDITOR—In page 132, April No. Cultivator, I observe a communication signed J. Townsend, on "Transmutation of Grain." This writer scoffs at the opinion, and attempts to ridicule the idea, of wheat turning to chess; but without, as I can perceive, giving any argument, or reason to sustain the contrary opinion.

Now I profess to have no particular *belief* either way. But I propose to state a few facts, and Mr. Townsend may work out the case either by argument, or through his "fulling mill," at his own convenience.

When you published the Genesee Farmer, say a dozen years ago, there was a long, and a very able controversy carried on for several months in that paper, by several of the most distinguished wheat growers in western New-York, *pro* and *con*, on the subject of transmutation. The result was a *drawn* battle; neither party convinced to the contrary of the opinion which he first advanced.* Scientific men were among those engaged on both sides, and all the *science* they possessed was brought to bear on the subject. After all, it was not settled that science, as it is called, was exactly *right* in its *first* principles, although no one has a more profound respect for that authority, apparently, than both parties engaged in the controversy. In it I took no part, being neither a wheat-grower nor a professor of any science. But to the facts in question:

It was proved, and it can be proved again, that a field of *new* ground just cleared from the forest and sown *well*, *uniformly* and *plentifully* in its first crop, with wheat, in which one kernel of chess could not be detected in a hundred of wheat, produced *chess* almost altogether, in the swails and low places, and under the fences, where the snow and water lay an uncommon length of time: so too, in places where geese had run over and fed on the early growth in the spring. The same with sheep, in some instances. Where the chess did not grow, the wheat was fine and clean, hardly a stalk of chess to be discovered. It was also proved, that different fields had been sowed with the same seed, where no chess had been seen for years before, and parts of some were chessy, and the others not at all. And these same facts, and others quite as strong, can be proved, in numerous instances and in different sections of the United States, any day, in a Court of Justice, by as intelligent, experienced, and "sensible" farmers and wheat-growers as can be found, although they never served apprenticeship at the "cloth-dressing business;" and I pledge myself ready to prove these facts, when this writer will agree to pay one half the expense of taking the testimony, which wo'nt at all events be much.†

The late Judge Buel—certainly no mean authority—in reply to a question I once asked him, what, after all the arguments on the subject, was the conclusion of his mind upon it? replied, "that after a long observation of the facts and theories which had been produced, he was forced to believe in the doctrine of *transmutation*."‡

This is all I have to say. I shall hold no argument with any one in this matter: but I certainly think that ridicule, and that not of the highest order, is not the way to put down this doctrine of transmutation.

L. F. A.

NOTES BY THE EDITOR.

* This may have been the case as regards the writers in the controversy alluded to; but not so with those who read it. We know many farmers who believed fully in the change of wheat into chess, who were converted to the truth by this discussion. They reasoned in this way: If, as is said, chess only grows from its own seed, the same as other weeds, we can eradicate it entirely from our farms. They tried the experiment—destroyed all the chess on their farms, and did not permit even a kernel of it to be sowed with their wheat. The consequence was, what might have been easily foretold—this pest was no longer found on their premises. For several reported instances of this kind, our correspondent is referred to the old Genesee Farmer, and to the first series of the Cultivator.

† Suppose the facts here stated, were sworn to in every Court of Justice in the country, would it afford any evidence that the wheat had turned to chess? That no wheat grew on the low wet places, or where it had been eaten off by geese or sheep, would prove, we should think, and that most conclusively, that the wheat in these places had been killed by the "snow and water," and "geese and sheep;" but it would no more prove that the wheat turned to chess, than that it turned to the other weeds and grasses which sprung up in those wet places where the wheat was killed.

‡ That Judge Buel came to this conclusion, upon hearsay evidence, is undoubtedly true. He once remarked to us, that the statements of Gideon Ramsdel, in our then paper, the Genesee Farmer, had gone farther than all other testimony, to convince him that the change of wheat to chess might take place. Now it so happens, that Mr. Ramsdel, long since, convinced himself that he was mistaken in a part of his statements; and we have little doubt that his experience has since convinced him that he was equally mistaken in supposing that wheat would, under any circumstances, turn to chess.

COMPOUND FOR SMEARING SHEEP, AND CURE FOR FOOT ROT.—SOLOMON HOXIE, Leonardsville, N. Y., sends the following recipes, which he says he has used for several years with advantage. "Immediately after shearing, I make the following compound, viz. 25 lbs. grease, one pint tar, boiled and well stirred together until nearly cold; then stir in two pounds sulphur, then rub the sheep with it, commencing at the head and follow along the back to the roots of the tail; this I have found to protect the sheep from the cold storms and also to kill ticks, &c.

"The following I have found an almost sure remedy for the foot rot, viz: 1 part Barbadoes tar, two parts spirits of turpentine, thickened with sulphur to the consistency of common paint; pair and clean the sheep's feet well, and rub in the compound, and one or two applications are almost a sure cure."

THE CULTIVATOR.

ALBANY, JUNE, 1845.

TO CORRESPONDENTS.

Since our last, communications have been received from T. Fountain, E. N. Horsford, A Farmer, T. J. Lewis, S. Hoxie, C. Waters, J. R. Blair, Solon Robinson, S. W. Jewett, H. Cooke, Experiment, Woodside, J. Plocker, J. Gotham, A Subscriber, A. H. Halleck, K., B. Wands, J. P. Norton, W. H. H. Taylor, W. Jennison.

We are indebted to Hon. Wm. Young, Halifax, for copies of the 3d and 4th Reports of the Central Agricultural Board of Nova Scotia for 1844 and 1845—To Rev. A. Whyte, for copy of Carolina Planter, containing his Address and other proceedings of the Indian Land Ag. Society, S. C.—To Lea & Blanchard, publishers, Philadelphia, for the 1st and 2d volumes of the "Narrative of the Exploring Expedition," and "Clater on Diseases of Horses," &c.—To Greely & M'Elrath, publishers, New-York, for Part II. of Lardner's Lectures—To F. Knight, publisher, Washington City, for a copy of "Fac Similes of Washington's Letters on Agriculture"—To (we presume) W. W. W. Bowie, Esq. for the Proceedings of the Prince George's Ag. Society, Md.—To L. Durand, Derby, Ct. for Pine Apple Melon Seeds—To Benj. Brewster, Montreal, for a cask of the Seed Corn, noticed in our Jan. number, which we have distributed to several counties, and which we have no doubt will be found a valuable acquisition to this section—To Joseph Walton, Esq. St. Andrews, New-Brunswick, for a barrel of Potatoes, including the "Howards," "White Blue Noses," "Black Apples," and "Red Apples." They are beautiful samples, and shall have a fair trial. All these gentlemen will please accept our thanks for their favors, which it will give us pleasure to reciprocate should an opportunity occur.

Trial of the Centre-Draft Plows.—The report of the Committee, under whose supervision this trial was made, was received too late for insertion in the present number, and we are therefore under the necessity of postponing it till our next.

MONTHLY NOTICES.

☞ We would remind our readers that Mr. Prentice's great sale of pure bred Improved Short Horned Durhams, is to take place at Mount Hope, near this city, on Wednesday the 25th of this month. For Catalogue of Animals to be sold, see our May number.

Franklin College.—We are rejoiced to hear that this Agricultural Institution is in successful operation. Though opened only in January last, it has now upwards of eighty students. We make the following extract from a private letter from our friend T. Fanning, the originator and head of this Institution, and congratulate him upon the success with which his indefatigable and well-directed labors have been attended. Mr. F. says—"Our Agricultural College continues to flourish, and every day's experience confirms me in my long cherished opinion that mental culture can be connected with physical and moral education. We have eighty students, and enough applications to make one hundred. I will not trouble you with details; but I rejoice to have it in my power to inform you that the success in every department is better than I anticipated."

Cheviot Sheep, &c.—Col. T. J. Carmichael, recently of Westchester county, in this State, passed through this city last week on his way to Rock Lake, Jefferson county, Wiskonsan, where he is making preparations to enter into the wool-growing business on a large scale. He visited the western country last summer, and selected his lands, and made his preparations to receive his flocks this summer. He commences operations with about 2000, selected from the best flocks in Ohio, last year. Since his visit to the west, he has visited England and Scotland, for the purpose of ascertaining by personal observation, whether any of the foreign breeds of sheep there bred, would be likely to prove more profitable, in his situation, than those to be obtained in this country. After a careful examination into the matter, he made choice of the Cheviot sheep of Scotland, on account of their hardiness, the weight of their fleeces, and the value of the wool for combing purposes. He brought home with him thirteen of this breed of sheep, five shepherd's dogs, and a Scotch shepherd—all of whom are now on their way to Wiskonsan. We have no personal acquaintance with the Cheviot sheep, but from the fact of their occupying some of the bleakest and most exposed situations in Scotland, and being there admitted to be the most hardy of all the varieties belonging to the British islands, excepting the Black-faced mountain sheep, we have no doubt they will prove valuable in this country, particularly where hardiness and vigor of constitution are so requisite as they are in Wiskonsan. The mutton of these sheep is considered equal to any in the English market.

The Horse "Black Hawk."—A cut and description of this horse, to which we would call particular attention, will be found in another column of our present number. Since Mr. Jewett's description was written, we have seen the animal, and feel bound to say, that in our opinion, his excellencies are by no means exaggerated. Neither does our cut, which was taken from Mr. Jewett's delineation, give in any degree too flattering an idea of the original. It is in general, a faithful portrait, though it fails to give some of the prominent characteristics of the horse as strikingly as could be desired. For instance, the cut represents the head too large, and it does not show that beautiful contour, bold and intelligent expression, which cannot fail to impress every one who views this noble animal. It is impossible also, to show by any art of the pencil, the hard, bony, flat, and sinewy legs, which peculiarly distinguish Black-Hawk. It is not our province to favor personal interests in particular—we desire to encourage only what is or may be *generally* useful; and in speaking approvingly of this horse, we cannot but feel that we are doing the country good service. More particularly of his qualities, or of the stock to which he belongs, we have not now room to remark—we shall have occasion, however, to speak more fully on the subject of *horses* in our future notes of a late trip to Vermont.

Hon. H. L. Ellsworth.—This gentleman has resigned his place as Commissioner of Patents, and gone to farming in Indiana. We are glad to learn, however, that at the request of the President and the new Commissioner of Patents, Mr. Ellsworth will continue his labors on the subject of agriculture; and now that he has more leisure, he will undoubtedly make these Reports, which have excited so much attention, far more valuable than heretofore.

Cream Hill School.—This school, under the direction of Messrs. S. W. and T. S. Gold and T. R. Dutton, is located at West-Cornwall, Ct., near the Housatonic Rail-Road. One object of the institution, is to give both scientific and practical instruction in agriculture and horticulture, embracing the most approved method of tillage, rearing of stock, cultivation of trees, the laying out of grounds, &c. &c. A portion of each day will be alloted to these objects. The farm on which the school is situated, consists of 200 acres, with convenient buildings, surrounded by a picturesque country scenery, in a location unrivalled for healthfulness. We are glad to see such schools increasing, and shall be glad to learn that they are well sustained, as they certainly ought to be.

☞ Complete sets of "The Cultivator," well bound, can be obtained a J. W. Cook's Agricultural Warehouse, Vicksburg, and of F. & J. Beaumont, booksellers, Natchez, Miss., by whom subscriptions for this paper will be received.

Early Peaches.—Col. Summer, Editor of the South Carolinian, Columbia, says that he received on the 5th May, some beautiful Nutmeg Peaches, perfectly ripe, from Capt. Henry Lyons.

FOREIGN ITEMS.

The latest accounts from England, represent the prospects for the grain crops as favorable. March was cold, and the fore part of April was dry, but timely showers came on the latter part of the month, and the weather the beginning of May was auspicious. Complaints are still made of the introduction of foreign live stock, "under Mr. Peel's famous tariff," and the British agriculturists are pronounced "as a body in a more depressed state, than has been the case for years past, showing the mischievous effects of the withdrawal of protection since 1842." A competition with the British farmers in the corn trade from abroad, particularly from the Baltic, is much feared, and it is said "there can be no doubt that during the summer, supplies to an extent seriously to injure the English grower, will reach them." Importations of bread-stuffs are not expected from Holland or France, as they are dearer than in England, neither are they looked for from the Mediterranean ports. Respecting the inducements for shipments of flour from this country to England, the Farmers' Magazine says—"comparing quotations there, with the prices here, the encouragement to make consignments to Great Britain is not very great." The receipts from Canada, it is anticipated will "increase from year to year, as a stimulus has been given to the cultivation of wheat by the Canada Bill, which, however favorable to the colony, must prove extremely injurious to the British grower."

Rotation—theory of vegetable excrements.—Dr. Playfair, in his late lecture before the Royal Agricultural Society, remarked that rotation was not a means of *improving* the soil. The soil remained in the same state, as far as the plant was concerned, and the great advantage of it consisted in the fact that one crop could be grown while the soil was preparing for another. The theory of De Candolle, with regard to plants throwing out excrementitious matter injurious to themselves, and beneficial to other plants, was now generally exploded, and many facts were entirely opposed to it. Thus in Hungary, there was never a poisonous effect produced on the wheat crops, although in some districts, wheat had been sown in succession for centuries.

Flour from Wheat.—The following table, interesting to farmers as well as to millers, shows the quantity of first, second, and third rate flour, produced from wheat of various weights per bushel, with the bran and waste. The numbers of parcels in the experiments tried, and the quantities of each, are given in the first and second columns.

Lots.	No. of bush.	Wt. per bu	FLOUR.				Bran.	Waste.	Total.
			Fine.	2ds.	3ds.	Total.			
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
4	480	56	......	45.8	......	45.8	9	1.2	56
5	760	58	40	5.5	2.3	47.8	9	1.2	58
8	1400	59	41	5.8	2.2	49.	8.6	1.2	59
7	1600	60	42.5	5.5	2.0	50	8.8	1.2	60
15	2192	61	44	5.2	1.8	51	8.8	1.2	61
7	1088	62	48.5	2.5	1.5	52.5	8.5	1.0	62

Birds vs. Wire Worms.—A correspondent of the Sporting Magazine states that no fewer than 1225 of those destructive larvæ were taken from the crop of a hen pheasant in January last. This of course could have been only about one day's consumption. (That number could not have formed a mass much smaller than half a pint—said crop must have been closely packed. Could there have been a mistake of one figure ?)

Black Leg in Calves.—We noticed sometime since in a Scottish paper, an article on rearing calves, in which it was stated that feeding them with oil-cake and turneps or potatoes, in winter, was deemed a sure preventive of the dreaded disease called *Black leg*. At a late meeting of a farmers' club in England, several members spoke of this disease, one of them stating that a large and excellent breeder effectually prevents it by cutting down to the veins of the foot and dividing them just before they branch off to each hoof; he divides the vein in every foot of the calf. Another member stated that he had frequently lost calves by black leg, but believed that by proper precaution, the disease may be prevented. He puts a rowel in each calf, and gives each an ounce of saltpetre once in three weeks. Since adopting this course, he has not lost one. It seems that a healthy circulation of the blood is a great object aimed at, and this is much promoted by such kinds of food as keep the bowels properly open.

ANSWERS TO INQUIRIES.

"Clock Pump."—*A Farmer.*—We know nothing of such a pump as is inquired for—should feel obliged to any one who would furnish information in regard to it—the fixtures, cost, &c. But would it not be better to work the pump by wind ? especially as it is designed for the prairies. A notice of a wind-mill for this purpose was given in our last vol. page 202. It is made by George Parker, Corrina, Penobscot county, Maine—the cost for a well, said to be twelve dollars.

Kidney worm in Swine.—"*A Subscriber.*" (Greenville, S. C.) Lye of wood ashes, or soap-suds, given with food, generally counteracts the disease, if taken in season. Copperas is also recommended, together with slops strongly impregnated with salt and red pepper, at the same time rubbing the loins well with spirits of turpentine. Arsenic has been used in desperate cases, but we do not know the precise quantity proper for a dose, and as it is a dangerous remedy, should never be used but as a last resort.

Harvesting Machines.—*J. C. N.* (Lake C. H. Ind.) We have never seen the operation of either of the machines you mention. Both Hussey's and McCormick's are probably good, but we cannot say whether either of them is used for cutting grass.

Shepherds and Shepherd's Dogs.—*J. P. M.* Franklin, Tenn.—Shepherds could be had from this vicinity, and we presume dogs, also, might be had here. Those having them for sale, or knowing where they can be had, will confer a favor by stating the price, &c.

Cheese.—Mr. Thayer, (Aurora, O.) We are not certain what kind of cheese you allude to. If any of our friends in Connecticut, where you suppose the article is made, can inform us in regard to a kind of cheese of eight to ten pounds weight, of particular value for shipping, they will confer a favor.

Salt and lye for fruit trees.—*L. H. M. (Bristol, Ct.)*—The quantity of salt which it will do to put round a fruit-tree, depends a good deal on the size of the tree. If the tree is a foot through, we should not suppose it would hurt it to put round a quart. But we have had no *experience* in the matter. As to the strength of lye for washing fruit trees, we have seen recommended a pound of potash to two gallons of water. A lye of the same strength as near as could be ascertained, made from wood ashes, would probably answer as well.

Tobacco.—"*A Subscriber,*" will find some information on the culture of this article on page 89 of our last volume.

A. N., *Westfield*, and others.—The person advertising, requires capital to the amount of some thousands of dollars.

Yale Literary Magazine.—This is a periodical published under the direction of the students of Yale College, New-Haven, Ct., which has now reached its tenth volume. Judging from the numbers which we have seen, it is an interesting work, managed with an ability and judgment which does honor to its youthful conductors. The number for January contains a well-written article on agriculture. The same number has a beautiful engraving of Yale College Library, and also a graphic picture of "Yale College, and the College Chapel in 1786." Published by A. H. Maltby, $2 per annum.

Indiana Farmer and Gardener.—Agricultural publications appear to be rapidly increasing in the west. A new one has just reached us from Indianapolis, the name of which we here give. Rev. H. W. Beecher, an able and interesting writer on horticulture, is to have the editorial charge of the paper, and it is published by S. V. B. Noel & Co., semi-monthly—16 pages 8 vo., at one dollar per annum.

CUTTING AND CURING HAY.

From our notes of the discussion, on "the proper stage for cutting grasses, and the best modes of making hay," at the seventh Agricultural meeting in this city, we give the following:

Mr. **Bement** said he had formerly been in the habit of cutting timothy grass quite late. It was easier cured after it got pretty ripe. But he found in using hay thus cut, that it wanted substance, and he had ascertained that the best time for cutting was while the grass was in blossom. In making clover hay, he had adopted Judge Buel's plan. He thought it best not to expose it much to the sun. His practice was to cut it in the morning, let it lay till noon, and then cock it, and let it sweat for two or three days according to the state of the weather. On putting the hay in the barn, he had used about four quarts of salt to the ton. Hay thus managed came out in the spring very bright and sweet. In the ordinary way of curing clover hay, the best parts are wasted.

Mr. **Howard** was aware that there were different opinions as to the proper stage for cutting grass; but he thought the observance of certain principles might afford a guide in the case. For example, the stems of grasses were filled just before the formation of the seed, with a starchy or saccharine substance. In perfecting the seed, the stems were exhausted of this substance, it being consumed in forming seed. Now if the herbage is the object, the plant should be cut before the nutriment has passed from the stems. If seed is the object, the plant must of course be allowed to attain a good degree of maturity. Hay made from ripe grass may "go farther," or "spend better," as the argument is; and it is admitted that this may be true, for animals are less inclined to eat it; but this is no proof that it is more nutritive. He spoke of the different modes of curing hay, with nearly all which, he said, he had been acquainted. Clover hay was altogether better when cured in cock, than by any other mode he knew practiced. All hay was better for undergoing to some extent, a sweating in the cock. Coarse timothy was thus rendered much softer, and was less strawy and stiff, and every description of hay was less likely to be "mow burned."

Mr. **Betts** was not in favor of mowing a great deal of grass while the dew is on. He was in the habit of spreading the swaths as soon as the ground was dry, and he always had it well cocked up before night. The next day, if the weather was good, he opened it again if it did not dry enough he put it together again; but his object was to get it so that it would do to put it in the barn. He was in favor of using a little salt with it. He had sometimes found his hay heat too much in the mow. From being hurried, he had occasionally put a load in the barn too green. To stop the heat and fermentation which had ensued in such cases, he had made holes in the hay with a crow-bar, and scattered in salt. In this way he had stopped the fermentation and saved his hay in very good order.

Mr. **Garretson**, of the Assembly, from Dutchess county, said he generally cut from 150 to 200 tons of hay per year—chiefly timothy and red-top. He generally begun when the grass was in the blossom. His method was to cut in the morning, spread the swaths lightly, and in the afternoon put it in cocks. The next day, if the sun came out, it was again spread, and if made enough, put in the barn, with a little salt sprinkled on it. About three quarts of salt to the ton was as much as he used. There was danger of using too much. He had formerly used more salt, and was satisfied his animals, particularly sheep, had suffered by it. It occasioned scouring—and by keeping their bowels out of order for some time, they died. He usually got about two tons of hay to the acre. In the latter part of the season it would sometimes make enough in one day.

Mr. **Mack** always directed his men to make hay as rapidly as possible. He had often made it and put it in the barn in one day, and never had better hay. He was always particular to secure it from dew when it must be left over night. It is said by some who had much practice in making hay, that it is never injured from its own internal juice, but only from rain or dew.

Mr. **Sotham** did not like the plan of salting hay, neither did he like the hay that was made in one day. If it could be so made that it would take no hurt, in one day, it must have been too dry for good hay before it was cut, or else very light burden. He would as soon have good bright straw for cows or sheep, as timothy hay after it had gone to seed. He cuts clover when a part of it is in blossom and part in the head. Cuts all his grass early. It takes longer to make hay cut thus early, but for cows and sheep, especially, it was a great deal better. The objection to salting hay was, that animals were forced to eat salt whether they wanted it or not, and it made sheep scour. His hay came out of the barn of a bright green color, and his stock would fatten on it. There was another great advantage in cutting early—the roots retained their life and strength better, and the after feed and future crops were much more abundant. He did not like timothy for hay—he never saw it in England—the farmers there thought it was too coarse and wiry for stock. Rye grass made good hay—would yield in England two tons per acre. Pacey's was the best variety—red-top made good hay. He had tried sainfoin—it did not come up well—there was always a difficulty about it in this respect, because the seed was good only a short time—it could hardly be brought across the ocean and vegetate. If we could get it here, it would be very valuable, especially for dry lands. As to pasturing mowing lands, some land would not bear it—particularly if wet—but he fed his dry lands very close, in the fall, with cattle and sheep, and experienced no damage from it.

Judge **Cheever** said he would cut his clover in blossom, not sooner. He would let it it take the sun one day, but not enough to have the leaf break off, then put it in small cocks and cure it, until by a few hours drying, by turning over and breaking the cocks, the fluids would be so far out of it that it may be housed without hurting. The length of time necessary to cure it will depend upon the state of the weather, and the larger or smaller growth of the crop. Upon this the farmer must exercise his judgment.

He would not cut timothy until it had passed out of the blossom. Professor Davy, in his Agricultural Chemistry, says that 64 parts of clover hay cut in blossom, produced 10 parts of nutritive matter, and the same taken in seed. Timothy, 10 parts in blossom, and 23 in seed. This in the timothy is probably too much; but that the nutritive matter in timothy improved after the fall of the blossom, he had no doubt. Red-top comes to maturity later, and he did not think there was much difference whether cut in blossom or soon after. He believed timothy cut in blossom would, pound for pound, produce more milk when fed to cows or sheep, than it would cut afterwards; but for horses and other stock, he thought it more nutritious to stand a little longer. It certainly improved in weight.

He preferred mowing his hay, as far as he could, when free from dews or water. He let the swaths take the sun a few hours, until the top got a little wilted or seared, before turning. It thus held up the greener parts when turned over and spread, and permitted the air to circulate under it; it also gave the ground between the swaths, time to dry, which was important in hastening the curing. In this way he avoided the necessity of turning the hay after being spread, which was one of the most tedious processes through which the hay had to be passed, and of course the most expensive. He never permitted his hay to take a dew when it had sun enough to wilt it considerably, if he could help it. The dew discolored it, and he had never been able to restore the fine fresh color afterwards. He preferred letting his hay stand over night in the cock. He could then better tell of its fitness to be housed. It is very easy to break up the cocks and give it more sun if necessary; and the slight fermentation or sweating in the cock, which is checked and dried off in carting, is a great preventive against heating in the mow. Hay heated in the mow is sure to be discolored. Some people insist that it is not injured for feeding, especially to cattle. It may be so. I know that flour, corn or oats, which have been heated until they are musty, are thought not so good. I do not know why hay should be.

On the approach of rain, I always put all the hay that has had any sun of consequence, into the cock. If the storm is a long one, it may turn yellow, so that it cannot be restored, but it will retain most of its nutritiive matter and its weight, whereas if left spread out to take the rain, it loses both, and is much worse discolored. I never use salt upon my hay, but upon compulsion. When the weather is good, I dry my hay sufficiently to keep, and as soon as I can, I house it; but sooner than leave it out to take a storm, even in the cock, I would put it in a little short dried, and apply salt to save it, as I would sooner have it salted than musty.

Dr. LEE thought it the best way to mow grass after the dew was off—spread it, dry it as much as possible, and rake it into winrow. If it was dried enough, and it would frequently be so, he would load it from the winrow, and save the labor of cocking it up.

PASTURES.

Land which is best adapted to pasturage, we think should never be plowed. This rule is particularly applicable to moist grounds, and those situated on hill-sides and mountains. We have frequently noticed a great difference in the production of grass on hill-sides, owing entirely to one portion having been plowed, and the other portion not having been plowed. The grass on the unplowed part is always much the best. In many instances, it is almost impossible to use the plow on a hill-side, without rendering the ground liable to be washed and gullied by rains; but if it is sown with grass-seed without plowing, the numerous fibrous roots of the trees and shrubs, will hold the soil together till it becomes thoroughly netted together by the grass-roots.

The natural condition of land as it is cleared of the forest, is generally favorable to the growth of grasses, as may be seen by the readiness with which they come in and flourish; and we believe that no mixture or reversion of the soil can be made with any advantage, for the production of grass. Drains may be made if needed, to make the ground sufficiently dry. The use of the harrow, after the growth has been properly cleared off by the axe and mattock, will put the surface in a good state for the reception of clover and grass-seeds, or for a crop of small grain, if it should be deemed advisable to sow one. Should young trees, bushes or sprouts, from the stumps, spring up, let them be cut out with the mattock; and should the grass die out, or mosses come in, a sharp-toothed harrow drawn over the ground, and seed sown in August or first of September, with a dressing of plaster, compost of muck and ashes, or rotted manure, will bring on a fine sward of good herbage. On lands naturally adapted to the growth of grass, the use of top-dressing, or a re-sowing of seeds, will seldom be necessary, for under a judicious course of feeding, the pasturage, instead of declining, will actually improve for several years. The occasional use of a light, sharp harrow, may however, increase the growth of grass, by preventing the sward from becoming "bound."

It is very important to obtain the best grasses and herbage plants for pastures. In making a selection, due regard should be had to the adaptation of the different species to climates and localities. Some of our indigenous kinds are excellent, and perhaps best, their hardiness and nutritive qualities being considered. For the middle and northern States, one of the most valuable sorts is the *Poa pratensis*, sometimes called "Kentucky blue grass," the "spear grass" and "June grass" of the northern and eastern States. On rich soils, not too dry, particularly those of a calcareous (limestone) nature, its produce is remarkable. It starts very early in spring, and grows late in the fall, but being effected more by drouth than some other kinds, does not always grow as much in the middle of the summer, though from the great tenacity of life in the roots, it seldom dies. It propagates itself by tillering, or by many lateral roots, as well as by seed, so that it spreads rapidly, and as other grasses die out, it soon covers the whole ground. Its nutritive qualities are comparatively but little destroyed by frost, and on this account it is highly esteemed for winter pasturage, in sections where but little snow falls. By keeping the stock from fields well set with this grass, so that it may make a good growth in the fall, excellent grazing is afforded to cattle and sheep during winter. Its leaves form a thick matted growth, the surface of which may be bleached a little by the frost, but the lower portion will be almost as fresh and green as corn, and will even in this condition fatten stock of any kind.

Another species of the same family as the above, and sometimes mistaken for it, is the *Poa compressa*, flat stalked meadow-grass, sometimes called "green-grass." It is more hardy, and is believed to be more nutritive than the Poa pratensis. It delights in warm loams, and is often very troublesome in the cultivation of wheat and other crops, and from the difficulty of killing it, it is generally considered a pest. Its produce is less than the before mentioned kind, but it is exceedingly nutritive, and much relished by cattle and sheep. Its stalk, even when the seed has ripened and fallen off, is quite green, and though it appears hard, animals always eat it greedily. It will grow in a colder atmosphere than any other grass we are acquainted with, is the first to start in the spring, the last to stop growing in the fall, and keeps greener than any other through the winter. For the advantage it affords as an early "bite" for sheep, particularly for nursing ewes, it might be an object to appropriate a suitable lot for it, which it would not be necessary to cultivate for other purposes.

Several species of the *Agrostis* family of grasses are indigenous to this country. The "red top," called in Pennsylvania and some other sections, "herds-grass," appears to be the *Agrostis vulgaris*, or "bent-grass" of the English books. In Massachusetts, there are cultivated two varieties generally known under the name of red top; one considerably larger and later in flowering than the other, and is better adapted to cold moist lands. The small kind is however held in great estimation for its nutritive qualities, especially for feeding working oxen, for which it is, in some districts, thought more valuable than any other grass. The large kind is generally most esteemed for pastures, as it is less affected by drouth and its growth is more constant through the whole season. On the whole, it is well worthy of cultivation as a grass for grazing.

Another species of Agrostis indigenous here, is closely allied to, if not identical with, the European "fiorin," *A. stolonifera*. It is a very nutritive grass, and is much relished by stock. It is, however, only adapted to particular locations. From its habit of extending itself by *stolones* or lateral roots, it is peculiarly valuable on loose spongy, or boggy soils, on which it forms a firm sod that may be trodden by sheep or light cattle with safety. It is also the best grass which can be used for sodding the sides of open ditches, or water-courses, which it does so effectually that the banks cannot wash, and are not liable to be broken; they presenting, when set with this grass, a beautiful smooth green turf, most agreeable to the eye.

Phleum pratense, "meadow cats-tail," "timothy," or the "herds-grass" of New-England, is much cultivated in this country for hay, of which it produces a great yield, and where the ground is rich and moist, it may be very profitably introduced with other grasses in pastures. In some sections it is pretty extensively used for this purpose. It is a native of this continent, and was brought into notice in England by Timothy Hudson about the year 1780, according to Loudon.

Of the clovers, there are two or more species indigenous to this country, viz., the white, or "Dutch clover," *Trifolium repens*, and a kind which we have not found in any botanical catalogue, called in the western part of the country, "buffalo clover." The latter is perennial, resembles the common white clover in the color of its blossoms and habit of growth, and in the height and size of its stem, is a medium between the white and the common red clover. The common white clover is usually much esteemed for pastures, combined with the grasses, but is thought not so valuable by itself, as it is deficient in quantity, and too much relaxes the bowels of animals when feeding on it.

There are a few grasses and herbage plants not commonly cultivated in this country, which it would be desirable to have introduced and fairly tried. The "orchard grass," *Dactylis glomerata*, is grown in a few sections, but is not generally known. As a pasture grass, it is worthy of more general culture. It produces abundance of leaves, starts very quick after being eaten off, and grows very rapidly. It should be sown thickly, (three bushels seed per acre, is recommended by English writers,) to prevent its growing up too much in bunches or tussocks.

The perennial rye-grass, *Lolium perenne*, is recommended for sheep pastures. We have tried this grass, and think highly of it for this purpose. The meadow fox-tail, *Alopecurus pratensis*, is well suited to moist pastures, and in England is esteemed one of the best of grasses both for grazing and hay.

The sainfoin, *Hedysarum onobrichis*, is considered one of the most valuable herbage plants known in England. It belongs to the leguminosæ family, but is in many respects quite different from any of the clovers. It is said to grow spontaneously on the calcareous mountains of the middle and south of Europe. It flourishes well on dry soils, and by means of its long fibrous roots, is said to find moisture even in the driest seasons. It is much esteemed both for pasturage and hay, and is said to afford on some soils a greater amount of nutriment per acre, than any other plant grown for those purposes. It is also recommended for keeping the sides of hills from washing. The roots will live in the soil, and retain their vigor many years.

A species of clover called in England, meadow-clover, cow-clover, or cow-grass, *Trifolium medium*, is perennial, and is much esteemed in pastures. It resembles in appearance, the common biennial red clover, *T. pratense*, but the leaves are narrower, and it grows to a less height. It is very desirable that this plant should be tried in this country. "A poor sandy soil it is said, will produce a good crop of cow-clover, that would not produce half a crop of the common red clover."—Loudon.

Several species of the Trifolium genus pass under the common name of *trefoil*. The most valuable of these is thought to be the French yellow trefoil, *Medicago lupulina*. It is perennial, or at least lives many years. It is well relished by stock, both in its green state, and when made into hay. It is thought of considerable consequence in pastures.

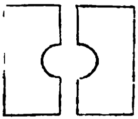
CUCUMBERS AND MELONS—PROTECTION AGAINST BUGS.

Cucumbers and melons for pickling, may be planted till the first of July. New land lately cleared from the forest, is best for vines, if it can be had; next to this, a piece which was the last year in sod and planted with corn or potatoes, is to be preferred. It should be of a medium state of richness and dryness, a better crop, so far as our experience goes, being more generally obtained from such land, than that which is extremely rich. Make the hills seven or eight feet apart. A very common error is to make them too close, so that the vines have not room enough, and they smother each other. Hog manure, that is pretty well rotted, or that which is in a green state, well mixed with muck and leached ashes, will do well. The manure of pigeons and hens is also excellent, but is very strong, and should be mixed with double its bulk of loam or muck. Dig the holes for the hills so deep that a peck at least of manure, may be put in without coming above the surface of the earth, level it off and plant the seed. To provide against the bugs and worms, it is best to plant a large quantity of seed. If there is twelve to fifteen plants to a hill while they are small, no injury will be done; but they should be thinned to no more than three, just before they begin to run, and have got well out of the way of insects. To keep off the bugs, millinet-boxes are the best preventives while the plants are small, and that is the time they are most likely to be injured. The boxes are cheap—made of pine boards six inches wide, merely nailed together square—the edge of the boards on two sides grooved—the millinet drawn over and fastened by tongues driven into the grooves. They should be large enough to fairly cover the hill without crowding. Plaster, coal ashes, or leached wood ashes, scattered over the plants while the dew is on, have some tendency to keep the bugs from eating them, but are not altogether effectual preventives.

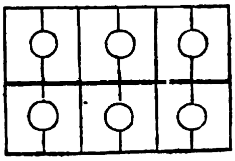
Several years ago we made trial of water in which hen dung had been soaked until the water fermented, for keeping off bugs from vines. An old hog-trough was carried to the piece, two or three shovels full of clean manure from the hen-roost thrown into it, with three or four gallons of water. It soon fermented, and the odor from it was very offensive. A half pint of this liquid was poured on each hill each alternate day. It kept off the bugs almost entirely, and made the vines grow astonishingly. They were melons, and produced the heaviest crop we ever saw.

CULTURE OF STRAWBERRIES.

The practice of placing flat stones under the branches of strawberries is frequently recommended. The object is to keep the fruit clean, and hasten the ripening and improve its flavor, by the radiation of heat from the stone. A writer in the Gardener's Chronicle recommends a very simple and cheap substitute for stones. He suggests that *tile* might be made of the form shown in the annexed cut, that would answer well, look neat, and cost but little. It is advised that they be made about 12 inches square, preserving room for the average size of the stems. After a season, in preparing new beds, the runners might be placed at equal distances, so that the bed would be entirely covered by the tiles, as shown in fig. 63. A bed 40 feet by 6, would require but 500, and their cost would be but little, as they could be made by any brick maker. We should think it hardly proper for the tiles to lie on the ground the whole season, as they might sometimes keep the heat too much from the ground; but we should suppose they would answer a good purpose if placed round the plants, after the ground had been worked and got well warmed in the spring—they would keep the soil from drying up, and entirely prevent the growth of weeds and grass.



[Fig. 62.]



[Fig. 63.]

AGRICULTURE IN NOVA SCOTIA.

We have received the third and fourth Reports of the Central Board of Agriculture for Nova Scotia. It appears to be the duty of this Board to receive the reports of the local societies, and to submit in a general report of its own, a view of the operations of all. It appears that the number of local societies in the Province, is no less than thirty-eight, some of which have been in operation for several years. The Provincial Government has placed liberal sums of money at the disposal of the Central Board which have been annually distributed among the societies of the different sections, for the encouragement of agriculture, and the result seems generally to have been highly flattering. A decided improvement is seen in their modes of cultivation, which has of course been followed by better crops. Improved implements of husbandry have been introduced from Massachusetts, and in some instances from England and Scotland, some of which, especially the Centre Draft Plow of Messrs. Prouty & Mears, are spoken of as being greatly superior to those which had been in common use. Bulls of the Durham, Hereford, and Ayrshire breeds, have been imported, and their progeny are said to be evidently superior to the former stock; those from the Durham and Hereford bulls, in particular, are said to winter better than the common stock, are much more thrifty and better shaped. Sheep of the Dishley or Leicester, the South Down, and the Chevoit breeds have also been introduced, and are every where spoken of as succeeding well, and all are much esteemed, being decidedly more profitable than the common stock. The Berkshire swine have been quite generally tried, and in most cases, are spoken of as superior to those formerly kept. Some stallions of the Morgan and Morgan and Bellfounder stock, have been introduced, and the foals by them are spoken of as being "precisely the stock which it is wished to rear." Upon the whole, the prospects are very favorable to the improvement of agriculture and the condition of the farmer throughout the Province.

PRODUCTS OF CALEDONIA COUNTY, VT.

Though located in the north-east corner of one of the coldest States in the Union, this county has long been noted for the independent condition of its inhabitants, and the large amount of its agricultural productions. If we mistake not, the census of 1840 indicated a larger amount of property, and a greater amount of produce, for each citizen of Caledonia county, than was exhibited for any other part of the country. We have received from Mr. J. P. FAIRBANKS, Secretary of the Agricultural Society of that county, a copy of the *Caledonian*, containing some valuable facts and statistics in relation to dairy products, from which we give the following summary:

"Dennis May, Waterford, kept 8 cows, and sold 750 lbs. of butter, and 900 lbs. of cheese. Robert Gilkerson, Barnet, kept 8 cows, and sold 840 lbs. butter, 120 lbs. cheese. Cloud Harvey, Barnet, kept 13 cows, and sold 1765 lbs. butter. The above was in addition to the amount consumed in their families. Lucius Freeman, Waterford, 7 cows, made 950 lbs. butter, 300 lbs. cheese. William Watson, Barnet, 21 cows, made 4000 lbs. butter. Johr Abbot, Barnet, 10 cows, made 2,198 lbs. butter. Francis E. Fuller, Hardwick, for 10 or 15 years has kept 10 or 12 cows, and made on an average 200 lbs. of butter from each cow. Mr. Watson's cows averaged 190¼ lbs. of butter, and Mr. Abbott's averaged 220 lbs. to each cow. The latter was sold at 18 cents per lb. and $2 additional on the lot. Perhaps cases are not rare of single cows that have yielded 200 lbs. of butter in the season; but it is believed that instances are not common, where a stock of from 10 to 20 cows, with no other keeping than good pastures, have produced on an average so large a quantity."

AGRICULTURAL ADVANTAGES OF N. JERSEY.

We are indebted to H. W. S. C. of Oatlands, near Burlington, N. J., for some remarks on the facilities which are offered by that section of the country, to emigrants from New-England. Our correspondent seems well acquainted with different sections of the country—is a native of Massachusetts, but has passed several years in the west as a surveyor, and settled in his present location from a conviction that in no other situation he had seen, could a man with a small capital, commence farming under so favorable auspices, a conviction which has only been strengthened by three year's experience. Of the advantages of the neighborhood, the first mentioned is facilities for markets. Philadelphia is twenty miles below, with which there is communication by the Delaware river and by rail-road, and the competition for freight between boats and cars, affords cheap transportation. The market train of cars will stop any where on the road to take freight. The farmer there is as near Philadelphia as the one within six miles, who hauls his own produce, and as the land is much cheaper than near the city, it follows that the farmer in the location mentioned has the advantage. The rail-road also connects with New-York, which city is reached in four hours, and there are at Burlington, plenty of purchasers of produce, always eager to buy any marketing that is rare and nice. The idea that New-Jersey is little better than a sand-bank, which is entertained by many who have only seen that portion of the State crossed by the rail-road from Amboy to Bordentown, our correspondent thinks would be no longer retained, if the section in which he is located could be seen during the season of crops and cultivation. He states that he cut last year upwards of two tons of timothy hay per acre on land which had received no manure for four years. But the region is peculiarly adapted to fruit and vegetables, which our friend thinks may be produced with great advantage and profit. As he had suffered severely from fever and ague in the west, he took care to satisfy himself of the perfect healthiness of his present location, before settling, and has had every reason to be satisfied on this account. All that is wanted, in his opinion, to render agriculture profitable in that region, is an enterprising class of farmers. They have, he says, already some good farmers, but more are wanted to give character to the neighborhood. The climate is in his estimation, a happy medium between north and south. During the past winter, farmers were engaged in plowing during a great portion of the month of January. In conclusion, he says he "would advise no man who has a farm on which he can support himself at the east, to sell out for the sake of doing better elsewhere, because, as a general rule, he must meet with some loss for an uncertain gain; but there are many shrewd men with a small capital, say from two to six, or ten thousand dollars, who might fix themselves here with a certainty of receiving a good interest on their investment, and an almost equal certainty of their property increasing in value, and it is for such men that this sketch is written."

NEW-YORK STATE AG. SOCIETY.

At the regular monthly meeting of the Executive Committee of the New-York State Agricultural Society, on the second Thursday of April, the Recording Secretary reported that he had received, since the last meeting, communications and books for the Society, as follows:

1. A Letter from ALEXANDER DJUNKOVSKY, Perpetual Secretary of the Royal Imperial Economical Society of Russia; accompanied by a volume of Extracts from the Reports of said Society, in the German language.
2. Two volumes of the "Transactions of the Royal Agricultural Society of Jamaica," from that Society.
3. A Letter from JOHN H. REDFIELD, Corresponding Secretary of the New-York Lyceum of Natural History, with three volumes of the Annals of the Lyceum.
4. A Letter from the Hon. WM. YOUNG, President of the Board of Agriculture of Nova Scotia, with the Annual Reports of the Board.
5. A Letter from THOMAS BRIDGMAN of New-York, with a copy of the new and beautiful edition of his "Young Gardener's Assistant."

A vote of thanks was passed for these several donations to the Society's Library, and copies of its Transactions ordered to be forwarded to the several Societies above named.

The following is a copy of the letter from the Imperial Economical Society of St. Petersburg:

RUSSIAN IMPERIAL ECONOMICAL SOCIETY,
Office of the Perpetual Secretary,
St. Petersburg, the 29th of January, 1845.

To the State Agricultural Society of the State of New-York, in the United States of America:

The Russian Imperial Economical Society, established in the year 1765, having for its object the improvement of different branches of rural economy, desires to enter into correspondence with your Honorable Society for mutual exchange of different experiments, observations and discoveries, in order to promote the national welfare of both countries. The Almighty having blessed the United States and Russia with immense tracts of fertile land, has pointed out to us that the principal occupations of both countries should consist in rural pursuits. Therefore we feel real sympathy towards your great nation, and the more so, because our Society has the honor of counting among its active and useful members, one of your distinguished citizens, the honorable Col. Todd, the Representative of your country in Russia.

Our Economical Society has for a long time expressed the wish of communicating with Agronomical Societies in other countries, but as our annual accounts of proceedings and the transactions of our Society are published in the Russian language, which is very little known abroad; so the Society commenced publishing extracts of the annual reports and of the transactions in the German language, which is generally understood in civilized countries, and the Society conceiving that these publications would be the means of communication between the two countries, has therefore charged me as its Perpetual Secretary, to forward to you a copy of the said publication;

and I take this opportunity to add, that I am very happy to be the organ of expressing the sentiments of the Society towards your great nation.

Alexander Djunkovsky,
Perpetual Secretary of the Society, Actual Councilor of State of the Emperor of Russia, Knight, &c.

☞ Persons to whom Medals of the Society have been awarded, can obtain them on application to **Luther Tucker**, Rec. Sec'y, Albany.

The Diplomas of the Society will not be ready for delivery, before September next.

All cash premiums remaining unpaid, will be paid on application either to T. **Hillhouse**, Treasurer, or to the Recording Secretary, Albany.

☞ The Transactions of the Society for 1844, are now ready for delivery. Each County in the State, is entitled to 20 copies, on paying for the binding, which costs $5, for the 20 copies. Orders for them, to be addressed to **Luther Tucker**, Rec. Sec'y, Albany.

DESTRUCTION OF WEEDS.

The present month is one of the most rapidly growing seasons of the year. The farmer's crops not only make great progress, but weeds too are ever vigilant in thrusting up their heads and asserting *their* claims to the ascendancy. If they once get the upper hand for a week, the crop may feel the injurious influence for the whole season. Let them be attacked then at the very outset.

Weeds among root crops and corn, are destroyed with one-half, and often with one-fifth the labor otherwise required, if taken when about one inch in height. In a week or ten days they will be five or six inches high, will cost three or four times as much to destroy them, and will have exerted a seriously injurious effect on the crop. Hence it would be cheaper to hire a man at a dollar a day, at first, than at half a dollar afterwards.

By adopting this course the last year with ruta bagas, hoeing them well *before the rough leaves were an inch long,* the work was done with great ease and expedition; and although the land was hard, dry, and not rich, and so stony as to render broadcast sowing necessary, the whole cost per bushel was only about three cents and a half.

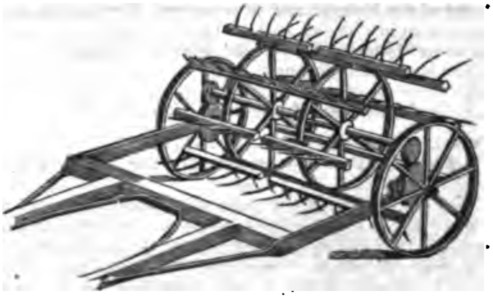
A large portion of the failures in raising ruta bagas, beets, and other root crops, have resulted from the heavy growth of weeds during the early part of the season, which are not unfrequently suffered to attain a foot in height before they are destroyed. The stunting effect on the crop, and the labor of weeding are obvious.

Repeated plowing and harrowing of the ground for some weeks before sowing roots, to clear it effectually of weeds, is a very economical operation, and saves much labor in weeding.

An excellent practice for keeping potatoes clean, where they are planted in drills, is to pass a fine-toothed harrow over the whole surface, just before they come up, to mellow the surface and destroy the weeds. When they are up, plow *from* the plants; then a light furrow towards them, thus leaving the hills or ridges *broad*. The hoe is only used for smoothing the surface and destroying what weeds escape.

It is well known that leaves are the *breathing* organs of plants; and that if a plant is kept constantly stripped of its leaves, or excluded from the air, during the growing season, the root soon dies. Hence all kinds of perennial rooted weeds, such as Canada thistles and milkweeds, are soon killed if kept smothered beneath by repeated deep plowing. As soon as the first appear at the surface, invert the soil upon them, and the roots soon perish. We have known many instances, and in every case completely successful where thoroughly performed, where the Canada thistle was destroyed totally by deep plowing once a month through the season, and which prepared the ground finely for wheat before mid-autumn.

Beet Root Sugar.—The total amount of beet root sugar manufactured in Great Britain and Ireland in 1844, was 5,597¼ cwt., an increase of 1,753¾ cwt. compared with 1843. Of this, 3,420 cwt. were manufactured at Startford, in Essex.



HAY-SPREADING MACHINE.—(Fig. 64.)

We believe American ingenuity has never yet been exercised in the manufacture of hay-spreading machines. While many farm implements have occupied a large share of attention, hundreds of patents having been granted for modifications only of single machines, the few hay-spreaders ever yet used here have been imported from Europe. These having been in many respects defective and not adapted to our country, have not been very strongly approved; but if those of American manufacture could be obtained, as much superior to the English, as our hay-rakes are to theirs, they would prove a most valuable acquisition. It is partly for the purpose of directing our mechanics to this subject, that we give the above view of the English hay-spreader.

It consists, chiefly of a frame and wheels, resembling a low, one-horse cart; between the wheels a set of horizontal *rakes* are made to revolve rapidly, their motion being in a direction opposite to that of the wheels. This motion is given from the wheels, through cog-wheels, to the axle on which these rakes turn. It is obvious that the wheels must be attached to the frame, without any axle passing between them, as that would interfere with the motion of the rakes, the axle of which is nearly a foot higher than the hubs of the wheels. The teeth of these rakes, by their rapid motion, strike the hay in the swath, lift it upwards and scatter it behind the machine.

The *rakes* consist of light pieces of timber, five and a half feet long, (so as to spread two swaths at once,) to which are attached the iron teeth, which are spikes seven inches long, fastened loosely so as to swing freely, and to fall back when they strike stones or other obstructions. Centrifugal force keeps them straight at other times. In long hay, a very thin, broad cylinder, incasing the frame-work which supports the rakes, is necessary to prevent clogging. As the hay frequently winds upon the hubs of the wheels, a covering upon them like the mud-protector of a carriage, would be of value.

Many years ago, a machine of this kind was introduced from Europe, by Gen. Wadsworth. W. W. Wadsworth of Geneseo, informs us, that after using it himself several years, he abandoned it, having become satisfied that hand-labor was more economical. The long heavy grass of the meadows on which it was used, rendered its successful operation more difficult than in light short grass.

A machine was also brought from England by Humphrey Howland of Cayuga county, and has been used for several years on his meadows. Though much heavier than necessary, with one hand and two horses it will perform the labor of about ten men. One horse goes before the other, and to clear the grass effectually and do the work well, they need to be driven on a trot, at the rate of about five miles per hour.

Machines of this kind are in much use in some parts of England, more particularly in the vicinity of London. Though somewhat varied in construction, they all appear to operate on a similar principle. The cost in London is about twelve guineas, amounting with freight and costs, when brought to this country, to nearly a hundred dollars. They could probably be made in this country for fifty dollars, perhaps for much less; and if of a lighter construction, and with a greater multiplying power in the cog-wheels, and such other improvements as yankee experience could introduce, would doubtless prove on large farms a decidedly labor-saving machine. This would be quite a desirable object at the busy season of haying.

Notices of New Publications.

AGRICULTURAL EDUCATION, &c.

European Agriculture and Rural Economy. From personal observation. By Henry Colman. *Vol. I. Part III.* Boston, A. D. Phelps.

The Third Part of this work is devoted principally to the subject of Agricultural Education. The Second Part closed with some account of the Agricultural School at Glasnevin, in Ireland. In the number before us, he gives some further particulars of this institution, and four others of a similar character, on the same island; Ireland having in this respect, taken the lead of both England and Scotland. This fact is the more striking when we consider the distracted state of that Island, and the extreme destitution and misery of a considerable portion of its population. Mr. Colman, however, eloquently remarks, that "this beautiful and wretched country abounds with intelligent minds, glowing with the warmest philanthropy. They appear, indeed, like stars in a partially clouded night, pouring out of their own native fulness, rays of the purest splendor." He was indeed greatly surprised at the degree of intelligence evinced by the Irish peasantry of some districts, and observes that "strange as it may seem, even the common people are familiar with the ancient classics." On inquiring of the hotel-keeper concerning the state of education among the people, "he immediately called in a dirty, barefooted, ragged boy, and told him to 'bring his books and show the gentleman what he knew.' The boy was the son of a shoe-maker, and ten years old." He brought in his Greek testament, and as Mr. C. says, "recited with perfect correctness, and showed a very good knowledge of the language, generally. He further remarks that he found classical learning was by no means uncommon in Ireland, even among some of the poorest people. His readers are however cautioned against the inference "that education in Ireland is every where of this high character, or that it is universal."

In relation to the application of this subject to agriculture, he observes—"Every one will admit that the more intelligence, the more skill, the more knowledge a man has, the better is he qualified, other things being equal, for the management of a farm. It holds equally true that the more intelligence, the more skill, the more knowledge, a laborer has, the better is he qualified to assist in that management, and to perform that part which belongs to him in working of the whole machinery."

In regard to the quantity of work performed relatively by the English and American laborer, it is remarked that the latter "accomplishes more in the same time," though Mr. C. observes that he "cannot say the Americans always do their work so well. Certainly, in plowing and draining, our operations are altogether inferior to what is done in England, where, in the perfection with which these matters are executed, nothing more seems to me attainable or desirable." But it must be borne in mind that, as is well remarked, we are under the necessity of accomplishing more with the same number of hands.

At the Glasnevin school, the pupils are regular apprentices, and labor is compulsory. Three boys do the work of one man. The Institution is under the management of Mr. Thomas Skilling. The great object is to give boys such an education as will fit them for practical farmers. Mr. Skilling is also employed to give instruction at the Model School, where men are educated as schoolmasters at the expense of the government, of which there are two classes a year, of one hundred each. This Agricultural school appears prosperous, and were it not for losses of cattle which have been sustained from a prevailing epidemic, it would at least have paid its way, if not more. A statement given from Mr. Skilling, shows the general course of management pursued with the pupils, their dietary, &c. They seem to be well treated, and fed in a manner well calculated to promote health and activity, though their food is not so abundant, and perhaps would not be thought of so palatable a kind, as some of the pupils of our schools might desire. Mr. Skilling observes that it is his object to "treat them as respectable members of society, and they will not relapse into their former wretched condition, but will work and obtain for themselves the comforts of life."

The other Agricultural schools in Ireland, of which Mr. Colman speaks, are those of Templemoyle, near Londonderry, Brookfield, twelve miles from Belfast, under the direction of the Society of Friends, and that at Larne. We cannot afford space to notice all these in detail, nor do we deem it necessary, as they are similar to the one already described. The Brookfield school was originally designed for educating the children of indigent members of the society. The children, which are about equally divided in sex, are admitted between the ages of eleven and thirteen. The establishment is under the direction of a man and his wife, with a school-master and his female assistant. The boys are taught agriculture and its kindred arts; and the girls are taught domestic economy and house-work, in connection with all useful studies. Mr. Colman remarks that he "thought extremely well of this Brookfield school as a charitable institution." He was especially pleased with the training of the children to habits of industry.

It was from the Larne school, that a class of boys were exhibited at the Highland Society's Show at Glasgow, of which such flattering notices have been given in the English and Scotch papers. Mr. Colman expresses very great gratification at having witnessed this exhibition. "The agricultural studies at this institution," he remarks, "are not made compulsory but voluntary; and one hour per day is devoted to agricultural labor. The Board of Education in Ireland have now under their control three thousand teachers; and it is proposed, whenever it may be deemed useful, to make agriculture a standard branch of common school education. They have already seven agricultural training establishments, and it is in contemplation to have twenty-five, with which it is proposed shall be connected small model farms, so that every where, besides furnishing this most valuable instruction to the pupils of the schools, the farmers in the vicinity may be excited and instructed to improve their cultivation." In conclusion, he observes that "these institutions do certainly the highest honor and credit to the intelligence and philanthropy of Ireland, and their beneficent effects must presently be seen in alleviating the indescribable amount of wretchedness under which this beautiful country and fine spirited people have been so long crushed to the earth."

There is a school of a somewhat similar nature at Ealing, near London, supported by Lady Noel Byron, which accident has prevented Mr. Colman as yet from visiting. This school is also in a highly prosperous condition, and is deemed of the most useful character.

The proposed Agricultural College at Cirencester, in England, is briefly spoken of. The plans for this institution are not fully matured, but Mr. Colman thinks "the scientific qualifications of some, and the practical character of others of the gentlemen, concerned in its establishment, and standing as its sponsors, warrant the best efforts for its success."

Next follows a chapter under the head of "General Views of Agricultural Education." Mr. Colman here observes that as the subject of agricultural schools has been much discussed by his own countrymen, who have already a distinct proposition for the establishment of an institution of this nature, he deems it proper to extend his remarks on this subject. He thinks—"It is quite certain that the course of education pursued at most colleges and universities, is quite unsuited to qualify men for the common business and pursuits of life. Indeed, it would seem in many cases to operate as a positive disqualification, and men who may have distinguished themselves at our universities for their classical and scholastic attainments, are often thrown upon society as helpless and as incompetent to provide for themselves, or to serve the community, as children." He objects to the system of education pursued at our colleges and universities, that it "has undergone little substantial alteration for a century," and he thinks the time and expense devoted to what are called "classical attainments," should be given to other studies infinitely more valuable. He believes that an institution "of the practical arts and of those sciences which bear directly upon practice, must be greatly desired by that portion of the community whose education must be to them a means of subsistence, and who have but little time to cultivate the arts, but with a view to apply them at once to the purposes of practical life." Under every consideration, Mr. Colman thinks the importance of an institution where may be taught the practical arts, and such sciences as are applicable to agriculture, is fully demonstrated.

"The perfection of the art of agriculture," he remarks, "is that in which the largest amount of product is obtained at the least expense of labor and manure, and with the least exhaustion to the land. Indeed," he continues, "there is reason to hope that we may presently reach a system of cultivation in which, though the crops may be large, the land itself shall not be exhausted, but be in a continued course of amelioration. I know well there must be a limit, but that limit no one can yet define. We know already that crops with large leaves, and therefore large powers of absorption, are commonly improving crops; and we know equally well that the growth of a forest upon land, so far from exhausting, is, in fact, an improver of the soil. The system of nature every where, if man performs his duty, is a system of amelioration, and not of deterioration; it is every where a system of recuperative compensations if man does not controvert or pervert its laws."

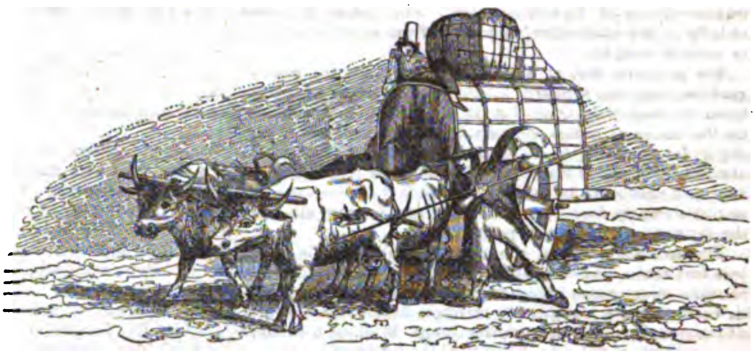
Chemical Science.—The high value of chemical knowledge in improving the condition of agriculture, Mr. Colman thinks "it is at least safe to presume." But he observes, that though he does "not mean to undervalue the science, nor to disparage what has already been done, nor to discourage the sanguine hopes which some entertain for the future; yet in the present state of agricultural-chemistry, the extreme confidence of some persons may be at least pronounced premature. The application of sulphuric acid to bones, seems as yet to be the only well established case of the application of chemical science to the improvement of agriculture upon scientific principles. The operations of gypsum are still an insolvable mystery, and the explanations which have been given of its effects do not appear to be confirmed by facts. The application of lime to the soil, and its particular advantages and uses, are still among the vexed questions of agriculture. The same uncertainty of explanation is applicable to various manures, in regard to their mode of operation and their precise chemical effects. I do not hold this as a reason for rejecting the aid of chemistry, but only as a ground for moderating a too sanguine confidence in its power. As it offers the most probable means of solving many of the secrets of nature's operations, and again many of the mechanical arts its triumphs are complete, there are strong reasons for pressing our inquiries by means of it, and for the best hopes of as much success as, in the present condition of the human mind, we have any right to expect."

Analysis of Soils.—Under this head, we are furnished with the results of many analyses of soils, in reference to the practical utility of which, Mr. Colman says—"I believe it may be of great utility in determining the general and predominant characteristics of the soil; but with great respect for science, and for the labors of those men who by their distinguished attainments have conferred the highest benefits on the community, I can come to no other conclusion than that any expectation of adapting our cultivation, upon any extended scale to these minute diversities of soil, is illusory; and that the most illustrious chemist living may be challenged in vain to prescribe any practicable culture adapted to meet, with any degree of exactness, the cases given, or to recognize in his applications or prescriptions, with any success, the minuter diversities of composition which are here presented."

Natural Science.—"Every possible facility," says Mr. Colman, "should be provided for the study of natural history, for every branch of natural history may be made subservient to agricultural improvement. There is, in my opinion, nothing which so invigorates and strengthens the mind, as earnest and deep inquiries into [illegible] the study of natural phenomena. The man who goes himself to the original sources of knowledge, and draws water out of the very wells of life, acquires a force of inquiry, maintains a healthful freshness of mind, turns every object and occurrence with which he meets, into an instrument of instruction, and finds nature no longer a dull, desolate, inanimate chamber, but its walls all over radiant with lessons of wisdom, and every object with which it is crowded, vocal with the teachings of a Divine spirit."

Plan of an Agricultural Institution for the United States.—In organizing an institution of this nature in this country, Mr. Colman is opposed to an expensive plan. Ireland, he thinks, "has set us an excellent example in this respect. With us, they might be in a great measure self-supporting." He would not suffer the number of pupils to exceed one hundred. "Some good sized hall or building would be requisite for public meetings, lectures, or recitation-rooms, and for a museum, library, and chemical laboratory; but I would erect no college-building for the residence of the pupils." He proposes that they should either board with families in the neighborhood, or else that several farm-houses should be erected on the place, "sufficient to supply the needful accommodations," &c. One or two instructors should be employed constantly for teaching the main branches of education, and a competent farmer should be employed to manage the agricultural department, and to give the necessary practical instruction. Beyond this, no resident instructors would be required, but regular and full courses of lectures and experiments in geology, mineralogy, botany, comparative anatomy, and the veterinary art and chemistry, by competent professors of these sciences, who might be employed for these objects annually, without the necessity and expense of constant residence, as is now frequently done at our medical schools. In this way, the best talent in the community might be commanded, and at reasonable expense. I would require in the next place, that the pupils should be placed in a condition of perfect equality, and that a certain amount of labor should be made compulsory on all, at such a rate of wages as should be deemed just, according to the ability of the pupil, and the nature of the work done."

The first object at such an institution, Mr. Colman thinks should be "the thorough indoctrination of the pupils in natural science, and in mechanical philosophy, so far as it can be made to bear on agriculture." That in the second place, the pupils should be furnished with an opportunity of witnessing the best farm management, and the best practices in husbandry. "The management of live stock whether for work, for fatting, or for dairying, might in a small degree be exemplified on every well-managed farm. Such an appendage as this to a school of practical instruction, where the pupils might see and have explained to them the very best modes of husbandry, must be of the highest benefit. To these should be added an *experimental* farm. This need not be extensive, and it might be connected with the model farm; indeed, the model farm might itself be to some degree, an experimental farm. It may be said that the premiums offered by agricultural societies for various experiments in husbandry, are sufficient to meet the public wants in this case. I admit that they have in this way rendered immense benefits to the public; but there are still wanted various trials and tests of soils, manures, grasses, plants, implements, modes of cultivation, modes of feeding, breeding, dairying, and on the effects of temperature, moisture, heat, frost, light, and electricity, which common farmers can scarcely be expected to undertake, or if undertaken, to follow out with that exactness which is most desirable, in order to render the results of such experiments worthy of confidence, and lessons for general application." He further recommends, that there should be connected with the establishment, gardens, "for purposes of botanical instruction, giving the pupils an opportunity of becoming acquainted with all the principal plants, grasses, forest trees, fruit trees, and weeds, which enter into their cultivation to the advantage or injury of the farmer; and for making the pupils thoroughly acquainted with the cultivation of all the varieties of vegetables and fruits which may be required for use, prof-



The Ox-Cart of Chili—(Fig. 65.)

countrymen, not with a view of dictating to their superior judgment, but to show that an institution for a practical and scientific education in agriculture may, without any hazardous expenditure, or any large investment, be made almost immediately attainable, and under every practicable advantage."

Under the heads of **Rural Manners in England, A Pencil Sketch**, and **Life in the Country**, we find beautiful, and indeed charming descriptions of the character of some of the higher class of farmers, and the nobility of England, but we are forced from the space allotted to this article, to pass over them without extracts.

The **Veterinary College**, near London, is spoken of; and is, in Mr. Colman's estimation, a highly useful as well as humane institution; and he earnestly recommends that similar establishments should be connected with medical schools in this country.

The chapters on the **Museum of Economic Geology**, **Chemical Agricultural Association in Scotland**, **Chemical Agricultural Lectures**, and **Employment of Agriculturists**, comprise the remainder of the Third Part.

The typographical execution of this, as of the former portions of the work, is beautiful, and certainly does much credit to Mr. Phelps, the publisher. We presume it is reasonable to expect that the remaining portions of Mr. Colman's work will be more particularly devoted to the details of husbandry as practiced in Great Britain.

THE EXPLORING EXPEDITION.

Narrative of the United States Exploring Expedition, during the years 1838, 1839, 1840, 1841, 1842; *by* Chas. Wilkes, U. S. N., *Commander of the Expedition.* Philadelphia: Lea & Blanchard.

This work was first published in five large imperial octavo volumes, with steel vignettes and line engravings of scenery, &c. together with finely executed maps and charts; making a magnificent, though expensive work. The publishers have now commenced the issue of a much cheaper edition, containing precisely the same matter as the first; the only difference is in quality and size of the paper, the substitution of wood-cuts for the steel vignettes, the omission of the line engravings and some of the maps. It is afforded at a price which will bring it within the reach of many from whom the other would have been debarred; the cost of the large edition being twenty-five, and that of the latter, only ten dollars. It will consist of five volumes, one of which will be issued about every two weeks till the work shall be completed. The publishers say the number of wood illustrations in this edition is nearly three hundred.

Taking Grass to Market in Chili—(Fig. 66.)

With the first volume of this work, which has been received, we are much pleased. It contains a very large amount of the most interesting and valuable matter pertaining to the various objects to which the attention of the officers belonging to the Expedition was directed. The volume numbers fifteen chapters, in which are given all the important details in relation to the fitting out of the Expedition, and its progress till its departure from Peru, on its course among the islands of the South Pacific. The only serious accident sustained by the squadron, was the loss of the Sea-Gull, one of the tenders, which, with all on board, it is supposed was sunk in a storm in the latter part of April, 1839. We cannot but express the gratification we have enjoyed in reading the accounts, which are no doubt truthfully, as they certainly are interestingly given, of the physical, civil, and social condition of the different countries and tribes of people, visited. We find much in reference to the agricultural and economical capacities, and rural management of those countries, which, did space allow, might be transferred to our pages, to the gratification of our readers, but our notice must necessarily be brief.

Having touched at Madeira, Rio Janeiro, and passed round Cape Horn, circumstances rendered it expedient for the squadron to put into Valparaiso for repairs, and while detained there, the officers made several excursions into the neighboring country. The city of Valparaiso, as well as the Province or State of Chili generally, is described as being much improved in its political relations, and in the morals and habits of the people, within the last twenty years. The agriculture, however, from the accounts given, must be still in a rather rude state. The plows are described as "nothing more than crooked sticks, with the share and point hardened by charring." The vehicles, the few that are used, for conveying produce to market, are almost equally rude and inconvenient. We are informed that "the heavy merchandise is for the most part transported in ox-carts of enormous dimensions. (See fig. 65.) Their wheels are clumsy, and without tires, and the whole frame is made strong with timber pinned together. Their perpendicular sides and rounded tops are wattled with cane and covered with bull's hide. No iron is used in their structure; wooden pins and raw-hide lashings serving to answer the purpose better. The yoke is set on the heads of the oxen, behind the horns, and fastened to them. The creaking of these carts may be heard for miles, as the drivers never think of greasing the wheels to lesson the friction. They are generally drawn by four or eight oxen."

Horses, mules, and sometimes lamas are used for the transportation of lighter articles. The lamas are used chiefly in the mountains, and carry from seventy to ninety pounds weight.

We are told that at Valparaiso there are no market gardens, and that "nearly all the vegetables are brought from the valley of Quillotta, about sixteen miles distant on the backs of mules, in panniers. The mode of bringing grass or clover to market, is peculiar; it sometimes almost covers both horse and rider." (See fig. 66.) The beef and mutton to be had in the market, is represented as proverbially fine—the prices of the former six, and the latter three cents per pound.

The account given of the condition of Peru, is much less favorable than that of Chili. The revolutions it has so often undergone, together with the late war with Chili, seem to have completely broken down the energies of the people. We are told by Lieut. Wilkes, that there is actually less soil now cultivated than was improved by the Indians, or the "children of the sun," before the Spanish conquest; and that every thing indicates the semi-barbarism of the inhabitants. The former accounts of their being no rain in Peru, are corroborated, so far at least as relates to an extent of the country of fifty to sixty miles wide along the coast. The records kept at Lima, show the occurrence of rain only four times during the eighteenth century. In other sections rain falls, and in some instances copiously. Irrigation is somewhat practiced in the districts which have not the benefits of rain. The soil and climate are favorable to many plants, and the irrigated land gives continued vegetation through the year. "Harvests are gathered in every season, and flowers and ripe fruits are seen at the same time."

Had we space, we should be glad to make further extracts from the work, especially in relation to the silver mines of Peru and Chili, which were visited by a detachment of officers and gentlemen, who collected much valuable matter in relation to them. We shall look with interest to the other volumes.

Since the above was written, we have been favored with the second volume, but have only time to say that the interest of the narrative, so far as we can judge from a partial glance, is well sustained. The work is for sale at Little's, in this city.

Transactions of the NEW-YORK STATE AGRICULTURAL SOCIETY, *together with an abstract of the Proceedings of the* COUNTY AGRICULTURAL SOCIETIES *and the* AMERICAN INSTITUTE: vol. iv.—1844.

This volume numbers 524 pages, octavo, and may be pronounced not inferior in interest or value to any former one published by this Society. Besides the account of the doings of the State Society, condensed notices are given of thirty-seven County Societies; and one hundred and eleven pages are devoted to the report of the American Institute. The book contains many highly valuable papers—such as the prize essays on the different branches of husbandry, and several able papers communicated to the State Society by distinguished writers and practical farmers, from various parts of this country as well as Europe. Among the papers reported by the American Institute, will be found the Proceedings of the Silk Convention held in the city of New-York last fall, during the exhibition of the Institute. The latest improvements in conducting the silk business, and many important facts are here given to the public through the medium of reports of committees, and communications from upwards of twenty individuals more or less engaged in the culture and manufacture of silk, in different parts of the Union.

Every man his own Farrier: containing the Cures, Symptoms, and most approved methods of cure of the DISEASES OF HORSES: *by* FRANCIS CLATER *and his Son* JOHN CLATER. *First American, from the twenty eighth London edition; with Notes and Additions, by* J. S. SKINNER. Lea and Blanchard, Philadelphia.

No works on the veterinary art have been received with more confidence than Clater's; of this, the numerous editions through which they have passed in England, is good evidence. Mr. Skinner's editions of Youatt on the Horse, Every Man his own Cattle-Doctor, &c. which have met with considerable popular favor, are proof that the present publication is ably edited. The work is well got up, in a cheap form, is well calculated for daily reference, and we have no doubt ought to be found, as Mr. Skinner says, "in every stable, along with the curry-comb and brush."

Popular Lectures on Science and Art; delivered in the principal Cities and Towns of the United States, by DIONYSUS LARDNER. Greely and McElrath, New-York.

We have received the two first parts or numbers of this work. It will be completed in not less than ten nor more than fourteen numbers, which will constitute two large octavo volumes, illustrated with numerous engravings. The price is 25 cents for each number. The work is an embodiment of the scientific Lectures delivered by Dr. Lardner in this country, which were received with universal satisfaction by all who listened to them. We take pleasure in recommending this excellent work to the public.

Elocution made Easy: containing Rules and Selections for Declamation and Reading, with Figures illustrative of Gesture. By R. CLAGGETT, A. M. Paine & Burgess, New-York.

A useful work, well worthy of introduction into our schools. For sale by E. H. Pease, Albany.

CONDENSED CORRESPONDENCE.

EFFECTS OF CHEMICAL COMPOSTS.—The articles accompanying the following letter were duly received. The sea-kale was decidedly superior to any we have ever seen:

Pelham, Ulster co., May 9, 1845.

MR. LUTHER TUCKER—To show you how much the growth of grass and grain may be accelerated by the use of chemical composts, I send you the following specimens, grown in the open field this spring, viz: Oats sown the 6th of March, 18 inches high; timothy grass 21 inches; clover 19 inches; and orchard grass 33; cut on the 8th of May—the three last were sown last fall.

I also send you some sea-kale, a delicious vegetable, eatable from the 10th of April to the 10th of May—it is blanched under boxes. R. L. PELL.

REMARKABLE FECUNDITY.—"K." gives us the "history of what may be called a remarkable cow, in every particular. She was bred, and is at present owned by Hawthorn McCulloch, Esq. of Greenbush, Rensselaer county. She is 9 years old this spring, and was sired by an imported Durham bull, out of a cross Durham and Native cow. The spring she was three years old, (her first calving,) she had twins—the next year a single calf—the next year, twins—the next year a single calf—the next, three—the next, twins—the next, (the present year,) three calves—in all, 14 calves in 7 years, all fine healthy calves, except the last three. She gives at present from 56 to 60 pounds of very rich milk per day. She is a large handsome cow, and fatted, would weigh 1000 lbs."

TO DESTROY CABBAGE LICE.—Mr. WELLER, of Brinkleyville, N. C. informs us that he has found sprinkling dry dirt on cabbage plants when the dew is on, will destroy or drive off the lice. We have tried dirt as is mentioned, as well as ashes and powdered gypsum, and have found ashes to do best.

TO PRESERVE VINES FROM BUGS.—Mr. WELLER also informs us that a decoction of tobacco and red pepper, sprinkled on the leaves of cucumbers, melons, &c. "will drive off at once and for good, the little oblong striped bug which is sometimes so destructive to these plants." Mr. W. has been told, he says, that the pepper tea itself will answer the purpose.

GARDEN TOOLS.—Extract of a letter from THOMAS COLLINS, Burlington, N. J.—"We have in use in this vicinity, two garden tools, invented here, and much approved; the principal one is a 'weeding hoe;' the other, a stout four pronged fork, for hand weeding in flower beds. The weeding hoe is a light tool, but very efficient for cutting off weeds when but a few inches high. Of the hoes, I have had manufactured many scores, and distributed in various parts of this country. Some were given away, others sold."

Improvement of worn out lands.—Extract of a letter from E. Stabler, Esq. of Maryland—"I have labored hard for some 20 years to improve a farm which was worn out by the 'old Maryland plan' of raising corn and tobacco. By the liberal use of lime, it is now prodvctive and profitable; having within the last 12 or 14 years covered the whole waste part (except 5 acres,) with from 60 to 100 bushels of lime to the acre. Twelve to fifteen years since, there were only 2 kilns within six miles of me; and only used to burn lime for building purposes; now there are within the same distance, not less than 35 to 40 lime kilns, and used almost exclusively for farming purposes."

Subsoil Plowing.—Extract of a letter from H. L. R. Sanford, of Volney, N. Y. The benefits of subsoiling should not be expected to be very great on loose gravelly land. "Last spring we procured one of Ruggles, Nourse & Mason's subsoil plows, and made some trials, but not with very good success. We plowed two acres for corn, in strips—a gravel ridge—one corner clay loam; could see no difference on the gravel, but think the subsoiled part on the clay, somewhat better. We tried also, another piece, clay loam, sowed to oats and planted with corn; could see no difference in the crop whatever; but notwithstanding this failure I mean to try it again."

Potatoe Rot.—J. R. Blair, Kent, Ct., is inclined to think the rot in potatoes last year, was caused by several weeks of wet weather in the summer, succeeded by excessive heat and drouth. He seconds the recommendations in the April number of the Cultivator to plant hardy varieties; says he "noticed white potatoes decayed more than the red ones." In regard to the suggestion about the use of lime, we will just remark that we have heard of several cases where it was put on the potatoes at planting time, without any apparent effect having been produced.

Charcoal Dust.—Extract of a letter from Mr. S. Camp, Plainville, Ct.—"I will mention an experiment made by myself about eighteen years ago. Having a piece of hill land, of about three acres ready plowed, I seeded it down to timothy. It produced about one ton to the acre. It has been mowed once, every year since, has had no manure, and has not been pastured at all. It has gained *one-third*, and remains the same kind of grass. About five years after sowing, I burnt coal near the place; I took from the bed, dry dust and fine coal in my cart, and with a shovel sowed twice through the piece which has increased the quantity of grass on those streaks ever since, nearly one-half."

Old Westchester awake.—Extract of a letter from T. Fountain, Esq. dated Peekskill, April 25.—"On the 17th inst. although a rainy day, about one hundred farmers met at the court house at White Plains, agreeable to previous notice, and formed a Society for the promotion of agriculture and horticulture in this county. The prospects now are encouraging, and we have the most cheering indications that old Westchester will do something worthy of herself, in the way of agriculture, horticulture, floriculture, &c."

Extraordinary Pig.—Harvey Ford, of Winchester Centre, Ct., informs us that Samuel Cook of Goshen, in that State, killed in November last, a pig, at the age of eight months and twenty-four days, which weighed, dressed, 472 pounds! "Being a gain," he says, "of more than a pound and twelve ounces per day, during the life of the pig, and a fraction less than two pounds a day from the time Mr. Cook bought it, April 12th, 1844, when it weighed twenty-five pounds. It was fed on corn-meal, uncooked, with the slops of the kitchen. It was worth at six cents per pound, (the price offered, but refused,) $28,32) from which deduct $16, the worth of the corn it consumed, and $2,50 the first cost of the pig, leaves $9,82 profit." Mr. Ford says he assisted in slaughtering the pig, and weighed it himself, and knows the weight above given to be correct. We believe the weight to be the most extraordinary for the age, that we ever heard of. Is there a *variety* or breed of swine in that neighborhood that can be brought to any thing like such a weight at eight or nine months old? How were the other pigs that belonged to the same litter with Mr. Cook's? Can any such account be given of them?

To destroy Alders.—A. H. Halleck, Esq. of Westmoreland, Oneida county, says—"Having a piece of low ground on my farm, with too many large bunches of alders upon it, I was induced to try an experiment to eradicate them. On the 23d and 24th days of August, 1843, I caused them to be cut off about twenty inches above the surface of the ground; the result was, that scarcely one sprouted the next year, (1844.) This season the old stubs are so tender and rotten, that they are easily knocked off level with the ground. I had a particular reason in causing them to be cut on those days. I am now so well satisfied that by taking a certain time in the month of August to cut Alders to exterminate them entirely, that if I had any more on my farm, I should cut them this summer, either on the 2d or 30th days of August next; I should however, prefer the last mentioned day."

Relief of choking in cattle.—Mr. Dunphey, of Fishkill Landing, N. Y., recommends the use of a piece of cable, four feet long and five inches in circumference, with one end made into a soft ball, to be pushed down the animal's gullet. We have generally known tarred rope used for this purpose. The size of the rope about *three* inches in circumference. A ball of tow, bound with soft leather, attached to one end, so that the end might be as large as an ordinary hen's egg. We have often seen cattle relieved from choking, by the piece of potatoe or turnep which occasioned the difficulty, being with this rope pushed into the stomach. From its flexibility, and the yielding of the ball of tow at the end, there is no danger of rupturing the gullet, as is often done in the barbarous practice of running down sticks, such as hoe handles, &c.

Remedy for "hoven," or "blown" cattle.—Mr. Dunphey informs us that he uses in this case, for "tapping" the animal, a knife which he describes as having a handle four inches long, a blade four inches long, and an inch and a quarter wide, and a hilt three inches long, and an inch wide. He says—"previous to using the above knife, an incision may be made with a small knife, one inch in length, downwards, on the left side of the animal, at five inches from the hip bone. Then the large knife may be plunged into the incision to the hilt, with safety, which allows the foul air to pass out, and gives immediate relief. Should the wound close so as to prevent the escape of the air, it may be kept open by inserting a small tube, and keeping the animal gently moving."

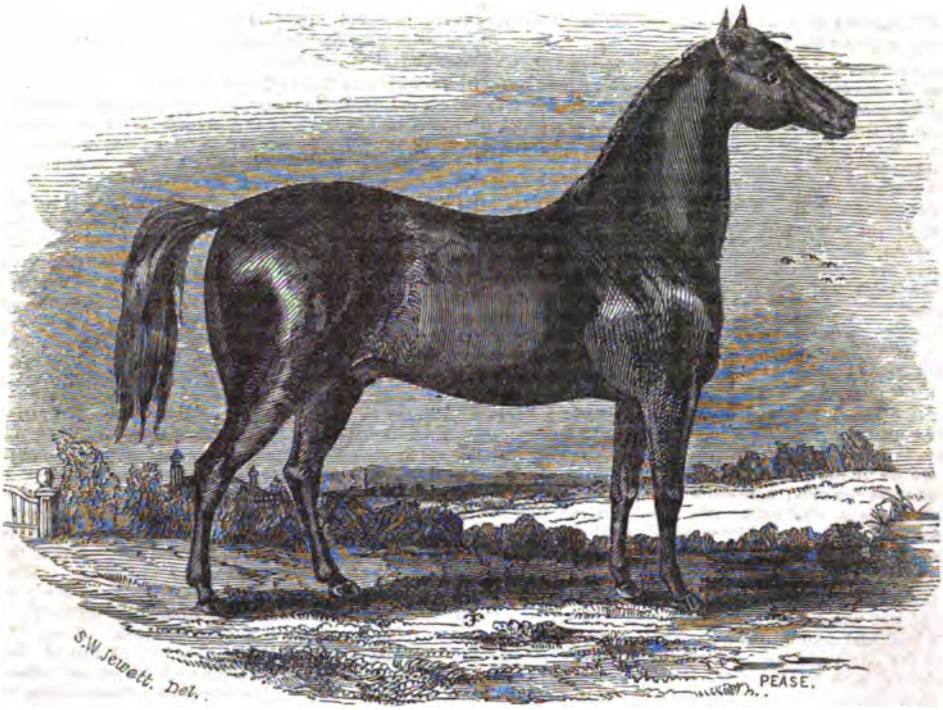
Use of Agricultural Papers.—Extract from the Corresponding Secretary of one of the County Agricultural Societies of this State:—"I have just returned from the meeting of our Executive Committee, and wish to repeat some of the conversation I heard.

"When on the subject of the plowing match, T. H. said, 'that plowing match, two years ago on Carpenter's place, did at least a hundred dollars worth of good to the neighborhood, by showing our farmers what some men could do. D—— —— would not believe there was a plow in the world equal to his; but he saw his mistake after receiving the fifth prize.'

"Speaking of cheese-making, it was remarked that A. L. had nearly always carried off the first prize; 'but do you know,' said B. 'how he managed to do that? He never was much of a dairyman, and his wife knowing nothing of cheese-making, learned how from reading the Cultivator—the directions in which she followed, and you see the result.'

'I don't question that at all,' said J. H., 'for I save every year at least four times the cost of subscription, by reading that paper.'"

Change of Seed.—I would like to ask the readers of the Cultivator if they are aware of the advantage to be derived from obtaining their seed, particularly wheat and oats from higher latitudes. Oats are much heavier here than in the south part of the State. Spring Wheat is also much improved by changing the seed. *Willets Keese, Clinton Co. N. Y.*



THE MORGAN HORSE "BLACK HAWK."—(Fig. 67.)

I believe the Morgan blood to be the best that was ever infused into the "Northern horse." They are well known, and are esteemed for activity, hardiness, gentleness and docility, throughout the New-England States; well adapted for all work; good in every spot, except for racers on the turf. They are lively and spirited, lofty and elegant in their action, carrying themselves gracefully in the harness. They have size in proportion to height; bone clean, sinewy legs, compactness, shor strong backs, powerful lungs, strength and endurance. A mixture of the Morgan blood, though small, may be easily known from any other stock in the country. There is a remarkable similarity prevailing in all of this race. They are known by their short lean heads, wide across the face at the eyes; eyes lively and prominent; open and wide in the under jaws, large wind pipe, deep brisket, heavy and round in the body, broad in the back, short limbs in proportion to size, broad quarters, a lively quick action, indomitable spirit, move true and easy in a good round trot, fast on the walk. Color, dark bay, chestnut, brown or black, with dark flowing wavy mane and tail; head up, and moves without a whip; about fifteen hands high; action powerful and spirited.

They are highly celebrated for general usefulness, make the best of roadsters, and live to a great age. In fact they are the perfect "Yankee harness horse."

The Morgans are very like the noble Arab, with similar eyes, upright ears, high withers, powerful quarters, hocks well placed under their weight, vigorous arms and flat legs, short from the knee to the pastern, close jointed, possessing immense power for their size, with great fire and courage. But a few of the Morgans, however, evince extraordinary speed.

It is said that the best stock of horses in the New-England States, are found among the progeny and descendants of the Sherman Morgan, which was owned by Mr. Bellows of Vermont.

The figure above is a portrait of Black-Hawk, "a colt of the Sherman Morgan, which was got by the old Justin Morgan horse. The dam of Black-Hawk was a three quarter blooded English mare, raised in the Province of New-Brunswick. She could trot a mile in less than 3 minutes, and weighed 1025 pounds, and was in every respect a most perfect animal."

Black-Hawk was bred by Mr. Matthews of Durham, N. H. He is a jet black color; weighs, in good flesh, 1040 pounds; his height is 15 hands and one inch. A line drawn from the hip even with the ham, just below the setting on of the tail, is four inches longer than the back, or the distance from the hip to the withers. A line dropped perpendicular from the neck, parallel with the fore leg, is nineteen inches forward of the junction of the withers. The distance between the hip and the ribs, is only one and a half inch. He has a broad and vigorous arm, flat and clean leg, large muscles, short from the knee to the pastern, large wind pipe and nostril, well open when under motion. He is one of the best proportioned and most elegant moving horses that can be produced. His colts are very fine and in good demand; indeed, I have been credibly informed that his colts when offered in Boston market, would readily command an extra $100, if the purchaser could be assured that they were by Black-Hawk. "Mr. Bates of Boston has refused $600 for a filly by Black-Hawk. She can trot a mile in 2 minutes 48 seconds. For bottom and speed in trotting, Black-Hawk cannot be surpassed. When a colt, he trotted in harness on Cambridge Park, one mile in 2 minutes 42 seconds, without training. In a match for $1,000, that came off at the Cambridge trotting Park, 12th July, 1842, against Osceola, five miles and repeat, he won with ease, although very fat and not in train. The first heat was performed in 16 minutes 30 seconds. The second in 16 minutes. In the Oct. following, he won a sweepstakes of $200, beating Grey Tim and Dying Sergeant. Had previously won matches for $400 or $500, and in fact has never been beaten."

David Hill, Esq. of Bridport, Vermont, obtained this celebrated horse of Benjamin Thurston of Lowell, Mass. He was kept at his stand last season in Bridport, and he designs to use him at the same stand hereafter for the improvement of horses.

He took the first prize at the Addison County Show last October. Mr. Hill contemplates exhibiting him at the N. Y. State Show at Utica next Sept., where I think he must be admired by all connoisseurs of the horse. He is perfectly sound, a close jointed, clean limbed animal, and carries a beautiful waving head, mane and tail. His legs are flat and hard, clean from long hairs on the fetlock; his eyes stand out prominent; his disposition kind and playful. He keeps fat with very little feed, too fat at the time I took the drawing, to develope all his points successfully.

At my suggestion, his hay was accurately weighed for one week, and the feed consumed, stood as follows: of oats and bran three quarts of each daily, and he consumed between five and six pounds of timothy each day.

No fault can be found with the horse unless it be in his size; however, his stock are sufficiently large for roadsters and for general usefulness in this State.

The patronage Mr. Hill receives from breeders both far and near, is sufficient expression of the opinion of the public, without any other recommendation. Relative to the origin and stock of Morgan horses, your readers may hear from me again by and by. S. W. Jewett.

Weybridge, May 1, 1845.

MANUFACTURE OF BUTTER.

The committee on butter for the Addison County Agricultural Society, in an elaborate report which we find in the Boston Cultivator, strongly recommend the use of Turk's-Island or rock salt, for butter. A little less than one ounce of this salt, properly pulverized, is said to be sufficient for a pound of butter—or 14 ounces salt to 16 pounds butter. The committee say that this kind of salt has a tendency to harden the butter, and that by working, it will be rendered ripe and fit for the tub or table, with but little more than half the labor required for bag salt. It is also stated that the properties of rock salt may be destroyed by too much heat in drying, and it is recommended that it may be dried in a clean place, in the shade. The committee discourage the use of Liverpool bag salt, altogether, as it is thought to contain certain impurities which render it unfit for keeping butter.

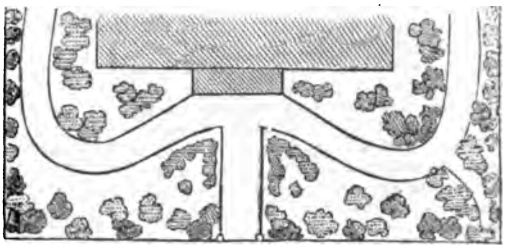
Dairy house.—The committee advise a well-ventilated cellar with a spring of cold water running through it, as the best place for keeping milk. They recommend that the pans be set in troughs and the cold water conducted around them till the animal heat of the milk has passed off—the water not to *stand* round the pans, but be constantly moving, and pass through a drain. After the milk is cooled, it is recommended to place the pans containing it into water, raised to the temperature of 170 degrees—but it should never boil or simmer. The pans of milk are then set back upon the troughs—(*not in the water,*) and stand for twenty-four hours, when the cream is taken off and churned. This process they say hastens the rising of the cream, so that it can be taken off in about half the time required in the ordinary way, improves the quality by preventing sourness, and greatly facilitates the operation of churning. The time occupied in heating the milk of a dairy of twenty cows, is from twenty-five to thirty minutes. The pans are made of tin, and handled when either cold or hot by tongs made for the purpose, which prevents any spilling or slopping of the milk. The churning is done every day except Sundays.

"In this way," say the committee, "good butter may be made at all seasons of the year. We prefer dog days, and the latter part of the season, before the frosts are so severe as to injure the quality of the grasses, on account of the many noxious weeds which find their way into the stomachs of some cows, while in their tender state in early parts of the season." The committee likewise remark, that the difference in the quality of the dairy products in different districts, is owing in part to the difference in the quality of the grasses on which the cows are fed. This principle they say is well settled in regard to tallow.

Working butter.—The committee say—"butter should be so made as to require but once working after the salt has been well incorporated—repeated workings expel more or less of the substances which constitute its good flavor, and should not be worked or washed off. If worked too much it will be gluey, and more tasteless than it should be in order to command the highest price." It is advised that the buttermilk, be worked out as thoroughly as possible at the first working—that it then stand in an even temperature from 58 to 62 degrees, for twenty-four hours—then be again thoroughly worked, when it is ready for the table, or to be laid down.

Washing butter in water.—This the committee say they "cannot recommend," and that "it is never done by the best dairyists in England." When butter is shipped for long voyages, it is sometimes washed in the strongest brine made of rock salt.

Kind of churn.—The committee highly recommend a churn which one of them has seen at Washington, so constructed as to carry many currents of air through the cream until the principle of separation is formed without any friction of oar or dasher. They say they are inclined to think this churn may take the place of all others in large dairies.



VILLAGE DOOR-YARDS.—(Fig. 68.)

The need of greater improvement in most of these is very commonly felt. To facilitate a better mode than the common practice, the annexed design is given. The plan is intended for such as do not have more than five or six yards width from the road to the front entrance.

Little description will be needed: the promiscuous mixture of large trees and small shrubs, so frequently practiced because all of them are small when planted, should be carefully avoided. In so small a space of ground, none but shrubs and the smallest size of trees can be admitted, except it be two or three of larger size at the front edge or corners. A suitable intermixture of evergreens gives cheerfulness to the expression in winter. Evergreen shrubs are indicated by those heavily shaded in the plan, and deciduous ones by those lightly shaded. If the house fronts the south, east or west, the flower beds at the corners of the gravel walk opposite the front entrance, may be introduced with great propriety; and even in case it fronts the north, provided those flowering plants are selected which flourish in the shade. A side gate at the right hand corner of the yard serves as an entrance to the kitchen, and is entirely concealed from the view at the front door by the shrubbery.

The selection of shrubs and plants must be at least partly left to the taste and convenience of the proprietor. Among the plants, however, for the beds, the following will make a fine show, succeeding each other nearly in the order named: Crocus, (various kinds,) hyacinths, Collinsia verna, Phlox stolonifera, Narcissus (the various species and varieties,) Iris pumela, tulips, Aquilegea canadensis, moss pink, Veronica spicata and gentianoides, Phlox ovata, the Pœnias, Dictamnus (white and purple,) Spiræ lobata, oriental poppy, upright clematis, common gladiolus, lillies (several species,) peach-leaved campanula (white and blue,) Liatris spicata and scariosa, Hibiscus palustris, New-England Aster, &c. Among the evergreen shrubs and small trees may be the red cedar, Chinese arbor-vitæ, Savin, English Juniper, tree box, white spruce, &c. Some of the finest deciduous shrubs are, Hibiscus syriacus, double-flowering almond, Tartarian honey-suckle, Mezereon, Japan quince, common white and purple, and Siberian lilacs, Philadelphus hirsutus, rose locust, purple fringe, laburnum, &c.; and among small trees, are the weeping and golden ash, the horse-chestnut, American and European mountain ash, the silver poplar, the spriped maple, the glutinous locust, &c. The smaller shrubs should be next the house; the larger at the sides and front line.

WINTER FOOD FOR STOCK.

Rich, loamy ground, will bear a good crop of English flat, or the Norfolk bullock turneps, after a crop of grass has been cut. Turn the sod over nicely, spread on some rotted manure, compost, or leached ashes, harrow well with a light sharp harrow, and sow the seed with a machine, or by hand, in rows eighteen or twenty inches apart, and when the plants are fairly out of the way of insects, thin them to eight or ten inches in the row, if intended for stock; if intended for the market, they should be thicker, to prevent their growing too large for the table. Four to five hundred bushels, and sometimes even twice that quantity, may be grown to the acre, and they are good food in connexion with straw, for cattle and sheep, till the middle of the winter, when they become so "corky" that the value is much lessened. The crop may be cultivated without much expense, if the weather only happens to be favorably moist at the time of sowing, and till the plants get into rough leaf. A very small harrow, with sharp knives so set as to cut the surface of the ground clean after the harrow-teeth, is the best tool we have seen for cultivating turneps on light land, and turneps can hardly be grown to advantage on any other.

Indian corn will give a good crop of *fodder* on rich land, sown or planted any time this month. Is not the kind called sweet corn, best for this purpose? We are inclined to think it is. It *suckers* a great deal, and the stalks are said to be as much sweeter than common corn-stalks, as its grain is sweeter than other kinds. Some varieties of it grow large also, and would probably yield as much weight as any. Another advantage about it, is the softness of the kernels—if it makes ears, the cattle eat them without waste, or at least with much *less* waste, than the kinds whose kernels are almost as hard as flint. It is the opinion of some farmers who have tried it, that this kind is best to raise for *fatting* cattle, where it is intended to feed stalk and ear all together.

With the exception of new land, or that which is free from weeds, we think it best to plant or sow corn for fodder in drills, rather than to scatter it on the ground broad-cast. If it is in drills, a chance is afforded to work with a harrow and cultivator, and keep down the weeds. Mr. Newhall of Massachusetts, whose farm management was spoken of in our January number, prefers the drill mode—rows three feet apart, and two to three bushels of seed per acre. He has raised very large crops in this way—larger than we have known grown by any one else. Another advantage of the drill mode, is the convenient curing. It may be cut with common corn-cutters or stout sickles, laid evenly and regularly on the ground, and, when fairly wilted, bound close to the tops in small bundles and set them in small shocks, open at the bottom, and well protected against the weather at top, till dried enough to put in the barn or stack. It makes capital fodder in this way—better for cows than timothy hay, or indeed almost any other hay, excepting the best of clover.

Millet is a good crop for winter feed, on suitable land; that is, a light (or not heavy,) soil, of middling richness. There are several kinds of millet, but the German and the Italian are most commonly cultivated. We prefer the Italian. Some think half a bushel of seed is sufficient so the acre, sown broad-cast, but no more than that quantity gives too coarse a stem, which does not make so good hay. We would therefore sow a bushel of seed to the acre. We have raised this grass in times past, and found it to make very nutricious and palatable hay. It should be cut while the seed is in the milk, well cured; and when fed, it is best to cut it with a machine. It will yield from a ton to three tons per acre, according to the state of the ground, the season, &c.

CAST IRON ROLLERS WANTED.

MR. TUCKER—I have been for some time on the look-out for a *cast iron roller*, suitable for lawns, walks, roads, &c., and thus far, I have been unable to meet with any thing of the kind. I am rather surprised that this article is not made and kept for sale in all our principal agricultural warehouses.

No well kept, and well cultivated place, should be without one; and indeed, no gentleman's place, boasting of either a lawn, or graveled walks, *can* be well or properly kept, without the frequent use of an implement of this kind. In England, they are as common, and thought to be as indispensable, as plows or harrows. They are constructed in various ways; but the simplest and cheapest, is a cast iron cylinder, from two and a half to four feet in diameter, and from three to five feet in length, with a shaft passing through the center; at each end of which, is attached the fixture for moving it, either by hand or horse power, according to its size or use. Arrangements are made to attach weights to the shaft, in the center of the cylinder, to make the roller either heavy or light, as may be required.

I cannot doubt that these articles would meet with a ready sale; and I think you would do many of your readers an essential and very acceptable service, by calling the attention of our manufacturers to the subject.

VINDEX.

THE YELLOW LOCUST.—In relation to the cultivation of the locust tree, Mr. Proctor, in his Address before the Essex Ag. Society, says—"I am fully persuaded that in no way can our barren and gravelly pastures be so advantageously used, as by covering them with the locust, which may be readily done, either by planting the seed, or by here and there transplanting a tree, and allowing them to spread, as they are much inclined to do. Lands thus managed, I have known to yield posts and rail-road sleepers, that sold for more than one hundred dollars per acre, for ten acres together, within forty years from the first planting—which, during this period had been of more value for pasturing in consequence of the trees growing thereon; for it is a fact, that the feed, both in quantity and quality, under and about the locust tree, is better than where there are no trees. Take into view also, the increasing demand for this kind of timber, for rail-roads, fencing, trunnels for ships, and other purposes, and the rapidity of its growth, advancing so rapidly that those who plant may gather, and it will not be easy to find an object more worthy the attention of the owners of such unproductive lands."

MAPLE SUGAR.—Mr. John Gotham, Kingwood, Preston county, Va., informs us that twenty-two pounds of sugar were made from one tree in a single season. The tree belonged to David Potter, and stood in Allegany county, Maryland.

PRICES OF AGRICULTURAL PRODUCTS.

New York, May 21, 1845.

COTTON.—The exports of Cotton, from 1st to 20th of May, were 21,754 bales. Prices, 5¼a7½.

BUTTER.—Orange County, in tubs or pails, 15a18—New Western dairy, 11a14.

CHEESE—New, sold readily at 7 cents.

FLOUR—$4.56a$4.68—Exports from 1st to 20th, 16,941 bbls.

GRAIN—Wheat per bushel, $1.04—Rye, 65a66—Oats, 28a30—Corn, 44a46. Exports, 4,907 bushels corn.

HEMP—Dew rotted, per ton, $95—Dressed, $145.

HOPS—per lb. 13a14 cents.

HAMS—Pickled, per lb. 5a7 cents.

BEEF—Exports 4,304 bbls.—prices not stated.

LARD—per lb. 7½a8. Exports, 6,664 kegs.

PORK—Mess per bbl. $12.50a$13—prime, $9.37a$9.50. Exports, 6,735 bbls.

TOBACCO—Kentucky, per lb. 3 cents—Connecticut seed leaf, 8a10.

WOOL—BOSTON, being the great wool-market, we give the prices of Wool in that city, as reported in the New-England Farmer of May 21:

Prime or Saxony fleeces, washed per lb.......	$0.42a0.48
American full blood fleeces,..................	38a0.40
" three-fourths blood fleeces,........	35a0.37
" half blood do	32a0.34
" one-fourth blood and common,....	30a0.31
Northern pulled Lamb's wool, superfine,....	36a0.37
do do No. 2,.......	23a0.25

ROME PLOW FACTORY.

THE DIAMOND PLOW which received the first premium at the State Fair at Poughkeepsie, as well as at every County Fair where it has been shown, is manufactured by the subscribers in the very best style, and for sale at wholesale or retail. Also, some eight or ten patterns of approved plans, as well as Scrapers, Cultivators, Cradles, Mott's Agricultural Furnaces, &c. Orders from abroad promptly filled, and a liberal discount to dealers.

March 1, 1845. BRAINERD & COMSTOCK.
Rome, Oneida county.

AURORA AGRICULTURAL INSTITUTE.

THIS Institution, recently opened, is located on a farm of over 200 acres, lying in, and directly adjoining the village of Aurora, on the east bank of Cayuga lake, in Cayuga county, New-York, 16 miles from Auburn, by stage, and 12 miles south from Cayuga Bridge and the Auburn and Rochester Railroad, by steamboat direct, in summer.

Its design is to afford every facility for young men to make themselves thoroughly acquainted with the principles of Agricultural science, and their judicious application to practical husbandry; and particularly to afford young men from our large towns, the most favorable advantages for preparing themselves for Agricultural pursuits.

Terms $150 a year, payable quarterly in advance. No person under fourteen years of age will, as a general rule, be received.

Pupils will be received at any time, and the course of instruction continued through the year without vacations, but permission of absence will be granted if requested.

Applications may be made to B. R. McIlvaine, 44 Great Jones st. New-York, to Rev. W. Roosevelt, 413 Rroome-st., and Hon. B. R. Wood, or the Editor of the Cultivator, Albany.

CHARLES C. YOUNG, A. M., Proprietor and Principal.
ALEXANDER THOMPSON, A. M., M. D., Lecturer on Botany, Geology, Agricultural Chemistry, &c.
DAVID THOMAS, Visitor and Adviser.

May 1, 1845—3t.

BOMMER'S METHOD AT REDUCED PRICES.

THE cheapness and expedition, by which manure may be manufactured with the Bommer process, and the various substances to which it may be successfully and advantageously applied, render it a valuable acquisition to every farmer that will adopt it. To facilitate its general introduction, it is proposed to sell the method uniformly at five dollars. Any individual shall be promptly furnished with a copy of the method without charge of postage, who shall remit the cash by mail to the general agent. It is intended to employ a competent travelling agent, as soon as practicable, in each county. My general agency includes the States of New-York, New Jersey, Virginia, Delaware, Connecticut, Rhode Island, Massachusetts, New Hampshire, Maine and Vermont.

ONE HUNDRED AGENTS WANTED.

Wanted immediately, 100 active, intelligent and enterprising men to engage as travelling agents in the above mentioned States. Unquestionable testimonials will be required; and responsible securities will be expected, as guarantees, for the faithful discharge of the duties of the appointment. Persons of suitable qualifications, will find this both a useful and lucrative employment. Applications, if by mail, should be post paid and directed to me, at Westville, New Haven Co. Connecticut.

ELI BARNETT, General Agent.

Westville, March 1, 1845.

FARMS FOR SALE.

THE farm in West Groton, known as 40 acres in the North East corner of Lot No. 63 Locke, consisting of a farm house nearly new, barn, and about 40 acres of improvement surrounded by a good fence, and now occupied by Robert Armstrong. Price, $1,500. One thousand dollars can remain on mortgage for ten years, at legal interest, half yearly.

ALSO—The farm known as the State 100 acres in the South East corner of Lot No. 2, Cicero, about a mile from the town of Brewerton, on the outlet of Oneida Lake, consisting of an improvement of 40 acres fenced, with log buildings, and sixty acres of woodlands.

ALSO—The farm known as the State 100 acres in the South East corner of Lot No. 54 Hannibal, a short distance from the town of Fulton, on the Oswego river, a good woodland, with a small clearing.

ALSO—The wood lot known as the State 100 acres in the South East corner of lot No. 5 Manlius, a few miles from Syracuse, and in a good neighborhood.

ALSO,

Wood lot	known as the	S.	100	ac. in the	S. E. c.	of lot No.	7	Solon
do	do	do		do	do	do	19	do
do	do	Survey	50	acres	do	do	25	do
do	do	do	50	do	do	do	29	do
do	do	do	50	do	N. W.	do	36	do
do	do	do	50	do	N. E.	do	39	do
do	do	do	50	do	S. E.	do	58	do
do	do	Sub 1	83	do		of lot	76	do
do	do	do 7	30	do		do	76	do
do	do	Survey	50	do	N. W	do	96	do
do	do	State	100	do	S. E.	do	65	Virgil
do	do	Survey	50	do	N. E.	do	68	do
do	do	Survey	50	do	N. W.	do	69	do

Apply to JAS. L. BRINCKERHOFF,
March 1, 1845—6t No. 32 Leight-street, New-York.

PLOWS.

AT the Syracuse Agricultural Warehouse and Seed Store, can be obtained Delano's celebrated Diamond Plow made by Mr Howard Delano, of Mottville, for the sale of which, we are sole agents for this town. Price, $6 for plain plow, and $10 for the wheel, coulter and clevey. Also, a full assortment of the well known Massachusetts Plow, made by Ruggles, Nourse & Mason of Worcester. 300 bushels seed barley, 300 do. pure Marrowfat Peas, 100 do. Clover seed, 150 do. Timothy, and a general assortment of all the varieties of seed sown by the tillers of the soil; Cultivators, corn plows, Wheel-barrows, Churns, Cheese Tubs, Cheese Cloth, Hoops and Presses, Hoes, Manure, Hay and Barley Forks, Shovels and Spades; and a very great variety of articles appertaining to the interest of the husbandman. Orders promptly executed.

Syracuse, April, 1845.—3t. FOSTER & NOTT.

AGRICULTURAL AND BUSINESS AGENCY.

KNOWING the convenience that such an Agency will be to his distant friends, the subscriber offers his services for the purchase of Match and Single Horses, Cattle, Sheep, &c.

Wagons, Carts, and Carriages.

Plows, Cultivators, Harrows, Rollers, Corn-Shellers, Corn and Cob Grinders, Threshing Machines, Grain-Reapers, Horse Power, and all other agricultural implements.

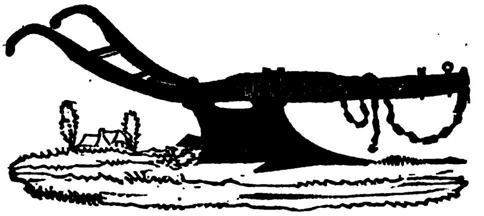
Seeds and Merchandise of every kind.

Manures.—Peruvian and African Guano, Ground Plaster, Ground Bones, Oyster Shell and Stone Lime.

Agricultural and other books.

From his long experience as a farmer and stock breeder, and general acquaintance with business, the subscriber trusts that he shall be able to give satisfaction. The commission charged for his services in purchasing or selling, will be moderate. Cash or produce must invariably be in hand, before orders can be executed.

Feb. 18, 1845—3t. A. B. ALLEN, 205 Broadway, New-York.



WORCESTER EAGLE AND SUB-SOIL PLOWS.

THE subscribers have now on hand a full assortment of the above superior Plows, manufactured by RUGGLES. NOURSE & MASON of Worcester, Mass. It is acknowledged by all who have made the experiment, that the "Improved Eagle," is the best Field Plow at present in use.

The advantage of Sub-soil plowing, is now very generally admitted, and the plows made for this purpose by Ruggles, Nourse & Mason, are constructed upon the most approved principles.

Side Hill Plows, Cultivators, Straw and Root Cutters, and a general assortment of farming implements, for sale at the Hardware store of PRUYN, WILSON & VOSBURGH,

Albany, April 1, 1845—2t. 39 State-street.

AGRICULTURAL CHEMISTRY AND GEOLOGY.

CATECHISM of Agricultural Chemistry and Geology, by James F. W. Johnston, M. A. F. R. S. S., L. & E. with an Introduction by John Pitkin Norton of Farmington, Ct., from the 8th English edition with notes and additions by the author, prepared expressly for this edition.

N. B.—The above work, first published a year ago, has already gone through eight large editions, and is now used in 3,000 schools in Ireland, and nearly all the schools in Scotland. The present edition, improved from the eighth, and adapted to this country, is now ready—price 18¾ cents. A liberal discount allowed to the trade. All orders promptly attended to.

ERASTUS H. PEASE,
Albany, March 1, 1845. Publisher, 82 State-street.

SEED STORE AND AGRICULTURAL WARE-HOUSE.

OUR Spring supply of seeds is now ready, and we shall be happy to receive orders for Field or Garden Seeds, of every description, Black Sea, Italian and Siberian Spring Wheat, Barley, Peas, Clover Seed, Timothy Seed, Seed Corn, Shaker and other Garden seeds, &c. Also, a full assortment of farming tools selected from the best manufacturers in the country. Hoes, Scythes, Forks, &c. cheap by the dozen.

E. COMSTOCK.

Rome, Oneida county, March 1, 1845.

QUINCY HALL
AGRICULTURAL WARE-HOUSE AND SEED STORE, BOSTON,

BY RUGGLES, NOURSE & MASON,

MANUFACTURERS of the distinguished WORCESTER PLOWS, among which, are a variety of patterns and sizes, adapted to all kinds and conditions of soil and modes of culture throughout the several States, and including the several sizes of their celebrated EAGLE pattern, and the genuine Scotch SUBSOIL Plows.

They hazard nothing in saying that with large additions to their warehouse and stock, they now offer to the agricultural public and dealers, a much greater assortment of agricultural and horticultural implements, machines, and seeds, than can be found at any house in the Union; all of which are selected from the most approved kinds found in this country and Europe.

All communications and orders from a distance, will receive prompt attention. and goods safely packed.

March 20, 1845—2t*

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☞ **ADVERTISEMENTS inserted in the Cultivator, at $1,00 per 100 words for each insertion.**

NOTICE.

THE partnership formerly existing under the firm of THOMAS & SMITH in the Nursery business at Macedon, is dissolved by mutual consent.

Macedon, 5th mo 1845.—June 1—1t.

LETTERS ON AGRICULTURAL IMPROVEMENT.

JUST published, small 4to. 1s. 6d. sewed; or 3s. cloth. A series of Letters on Agricultural Improvement; with an Appendix. By John Joseph Mechi. With four plans of the Farm and Machinery.

London: Longman, Brown, Green, and Longmans.

June 1—1t

FOR SALE,

AT the New Commission Ware Rooms, No. 5, Burling Slip, viz: Premium Plows, universally approved, prices, $3,50 to $15. Premium Portable Burr Stone Mills, $35 to $100. Hussey's Premium Corn and Cob Crusher, $35 and $36. Dickey's Premium Fanning Mills, Corn Planters, Seed Sowers, Corn Shellers, Straw Cutters, and the "Warren's Portable Improved Horse Power and Threshing Machines," &c. &c.

Samples of the foregoing articles, with others most approved, may be seen at the rooms of the undersigned, and all orders filled promptly. Wholesale or retail. J. PLANT,

Successor to L. Bostwick & Co., 5 Burling Slip.

New-York, June 1, 1845—1t.

NORTH DEVON CALVES.

THE subscriber offers for sale 4 full blood North Devon Bulls and 2 heifer calves.

Two of the Bulls 5 and 6 months old, price each, ... $25
" " 11 " " 30
One of the Heifers, 12 months old, price, ... 30
" " 18 " " 40

They are beautiful animals, in fine condition, and of a suitable age to ship. Address JOHN P. E STANLEY,

46 South Calvert corner of Lombard-street.

Baltimore, Maryland, June 1—2t.

BOOKS FOR SALE.

AMERICAN Farmer's Encyclopedia, price $4—Skinner's Cattle Doctor, price 50 cents, and a variety of other works, for sale at the office of "The Cultivator."

WOOL DEPOT.

THE subscriber will open a Wool Depot in the village of Kinderhook, and be prepared to receive from the farmers their wool in store, immediately after shearing, upon the following plan, which has been submitted to many of the most extensive Wool Growers in this county, and receives their cordial approbation. If the lots of wool brought by each farmer are not even in quality, the subscriber will assort the fleeces, designating each sort by numbers, and keep a true record of the whole. As soon as a sufficient quantity has been collected to offer inducements for manufacturers to purchase, they will be invited to examine it, and it will be offered for sale at what each separate sort may be worth. But if the lots of wool are even in quality, or if the owner wishes, they will be kept separate, and offered for sale entire. Liberal advances in cash will be made when the wool is delivered in store, on the usual terms of commission business. An insurance will be effected on the wool, a rationable proportion of which will be deducted from the sales. All other expenses will be paid by the subscriber, for which a commission of one and a half cents per pound will be charged.

Many of the most prominent wool manufacturers have engaged to visit the Depot for the purpose of buying.

Reference can be had to the following persons, viz: J. P. Beekman, Kinderhook; E. B. Pugsley, Ghent; J. J. Van Valkenburgh, Chatham; D. S. Curtis, Canaan; John Murdock, Lebanon; M. K. Beale, Austerlitz; John Martin, Claverack; J. C. Esselstyne, Claverack. H. BLANCHARD.

Kinderhook, May 15, 1845.—june 1t.

Mr. Blanchard proposes to establish a Depot for the reception of wool for sale according to the terms of his advertisement. His plan is, to my apprehension, the only feasible mode to enable the farmer to get the full value for his wool, as in most cases he is unacquainted with the market value of the article he sells, and thus prevents speculation by Agents; besides, it will be more satisfactory to manufacturers, as they can purchase a large quantity at once, and from their own inspection. I have the fullest confidence in Mr. Blanchard's capacity, integrity and judgment. J. P. BEEKMAN.

Kinderhook, May 17, 1845.

EXTENSIVE SALE OF IMPROVED SHORT HORNED CATTLE.

HAVING become over-stocked, I find myself under the necessity, for the first time, of publicly offering my cattle for sale; and that the opportunity to purchase fine animals may be made the more inviting, I propose to put in my Entire Herd—such a herd of Improved Short Horns as has never before, perhaps, been offered by any individual in this country. The sale will embrace about fifty animals, Bulls, Cows and Heifers; all, either imported, or the immediate descendants of those which were so, and of perfect pedigree. Those imported, were from several of the best stocks in England, selected either by myself or my friends.

It is sometimes the practice at sales of this kind, where the interest involved is considerable, for the proprietor to protect himself by buy bidders, or some other kind of management, or for the owner to stop the sale if offers do not come up to his expectations or the requirements of his interest. Such practices have a tendency to lessen the interest in public sales of this character, especially with those who cannot attend without considerable personal inconvenience. But in this case, assurances are given that no disappointment shall arise to the company from either of the causes mentioned, and a good degree of confidence is felt that there will be no dissatisfaction from the character of the cattle themselves They shall all be submitted to the company, and sold at such prices as they choose to give, without any covert machinery, effort, or understanding with any persons; reserving to myself only the privilege of bidding openly on three or four animals, which shall first be designated. This reservation is made hat I may not get entirely out of the stock of some particular families which I highly esteem, and that could not probably be replaced.

A full catalogue of the animals was inserted in the May number of the Cultivator.

The sale will take place at Mount Hope, one mile south of the city of Albany, on Wednesday, the 25th day of June next, at 10 o'clock A. M. E. P. PRENTICE.

Mount Hope, near Albany, May 15, 1845.

☞ Gentlemen from a distance, who wish to obtain stock at the above mentioned sale, and may find it inconvenient to attend in person, are informed that the subscriber will make purchases for those by whom he may be authorized. They can state the sum at which bids should be limited, and if convenient, designate the animals they would prefer; or give such general instructions as they may deem proper, under the assurance that they will be strictly adhered to.

SANFORD HOWARD.

Cultivator Office, Albany, March 15, 1845.

DURHAM BULL CALF AND HEIFERS.

THE subscriber will sell a Durham Bull Calf one year old 21st March 1844, a remarkable thrifty animal and good handler; when about 10 months old weighed 720 lbs. He was got by his prize bull Meteor. Also, a yearling and a two year old heifer, one got by Meteor, and one by the imported bull Duke of Wellington. Letters post-paid, will be answered. GEO. VAIL.

Troy, May 1, 1845—2t.

FARM IN ILLINOIS.

FOR SALE—A good farm, with valuable improvements. The subscriber being about changing his business, will sell a great bargain. Also has in immediate vicinity, 2,000 acres choice land, which he will sell at a discount from government price. Address ISAAC HINCKLEY, P. M., Audubon, Montgomery Co., Illinois.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES.

VOL. II. ALBANY, JULY, 1845. No. 7.

THE CULTIVATOR

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LUTHER TUCKER, EDITOR AND PROPRIETOR.

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Foreign Correspondence.

MR. MITCHELL'S LETTERS—No. VII.

Irish Peasantry—Culture of Potatoes in Ireland, &c.

London, 19th May, 1845.

LUTHER TUCKER, ESQ.: Dear Sir—Leaping from Jersey to the north-east coast of Ireland we find, in place of the bright green fields and high hedge rows, a succession of wild hills covered with a stinted furze, destitute of fencing and profitless save for pasturage. There are indeed little huts to be seen about their edges, and a meagre cultivation is creeping lazily round their skirts; and between them, here and there, are rich vales, in one of which lies, half-way up the north side of Carlingford bay, the beautiful village of Rosstrevor. The general character of the surface however, on a first approach to the shore, is uninteresting to an agricultural eye. The homes of the laborers are mere huts of mud and stone, possessing none of the rural charms belonging so eminently to those of England, but are slatternly without and filthy within. In fact, the Irish peasant, from my observation, is as peculiar for his want of taste and neatness, as is the English for its possession. I have indeed seen beautiful way-side cottages in Ireland, but not having a beauty that would bear examination in detail, and possessing more charms in the distance than when under the eye. This peculiarity is observable not only in their homes, but in every habit of their out-of-door life. Their implements are left scattered about the fields—their fences are stragling—their clothes ragged, and their habits of labor destitute of all system. Thus the ditcher will work like a madman for an hour—his coat in the ditch, and his hat on the fence, and then will throw his spade upon the ground and run to his cabin for a boiled potatoe, and if he have no line to direct his work, he will be as likely to trench in a circle as in a direct course.

Returning to the neighborhood of Newry, where I landed, I saw scattered about small lots of wheat, but most of the available soil was thrown into ridges for potatoes. The method employed, I found afterwards, to be almost universal throughout Ireland. The land was first plowed, then laid off by stakes or lines into strips of four or five feet wide—an interval of eighteen or twenty inches being left between each. The manure is spread carefully over the wider strips—the tubers (uniformly cut) placed at distances of five inches apart each way, upon the manure; all the soil is then dug from the narrower strips and thrown carefully and lightly over the seed.

As I approached the town, passing for some four or five miles under the high wall of the park of an Irish peer, the country spread out into a more level and richer surface. The houses, thickening into streets, were even more dirty than the scattered ones nearer the sea. The pavements, if indeed any belonged to the streets I first entered, were covered with all manner of filth, and the front of nearly every cabin was adorned with an unctuous pile of manure placed just outside and opposite the door, on which were gallopading, with tangled hair, half naked children of every degree; and I was agreeably surprised amid the general foulness, to see running out of one of the most pretending of the houses a nice pair of Berkshire pigs; and through several side entrances I had passing glimpses of fair looking cows quietly munching at a lock of hay.

It was market day, and the roads were crowded with booths and clumsily made carts, and the women scattered beside the way, with goods of all sorts, from old iron sauce pans to bunches of mint and radishes, were earnest that I should buy a ha'penny's worth—no inconsiderable sale for those whose whole stock was barely worth a shilling. The absence of all cleanliness in street—in shop—in dress—in person—was disgusting. The meats on show were excellent, and so were the vegetables, but cleaner salesmen would have made far less excellent provisions more tempting. Flaming advertisements were posted in every part of the town of the first ships bound for New-York—and I found them scattered throughout Ireland, and not on one occasion only, witnessed the parting of some youth from friends, for a trial of life in the west, and heard, not without emotion, the sighs, and farewells, and screams, in which that excitable nation are prone to indulge.

Immense numbers of cattle and swine are annually shipped from Newry to Liverpool—the steamers bringing over in turn manufactured goods—and not unfrequently, at present, guano and the patent manures. Indeed, I may say, from my observation, that the vaule of manure is more fully appreciated in Ireland than in most parts of England. And though Irish tillage has not yet availed itself of the latest scientific aids, and is slovenly in its operations, though drainage and irrigation are not yet generally adopted, yet have I nowhere in England—in travelling through twelve or fifteen of its principal counties—seen such scrupulous preservation of every substance that will enrich the soil, as in Ireland.

Travelling north and west from Newry, the country improves in richness and beauty. The roads, as they are everywhere in Great Britain, are excellent; the fences not so trimly built or clipped as in England—stiff effective barriers against unruly cattle, and there are glimpses among the hills of the green valleys which nourish the thousands of herds that find their way across the channel. Women are in the field, not scorning the hardest of the labor, and as hard favored and as dirty as the men. The spade does more than half the office of the plow in all the potatoe fields—hence their great crops and the equally great crops of grass that follow. Though it was the 20th of April, when in the north of Ireland, I saw clover that would have turned a ton to the acre. Their course seemed to be—potatoes on a grass lay—next oats or flax with clover or rye grass—sometimes wheat intervening, or vetch and rye, followed by flax with small grass seeds. From my description of potatoe planting, you will see that the land has the appearance of a great number of high beds; these are plowed lengthwise for seeding; the consequence is—the fields present a succession of rounded barriers, not easily cropped under our method of mowing. They use, however, a short hook in place of a scythe—another reason for the fact notorious with us—that an Irishman is no mower, but a good reaper. The horses seen in the fields are far inferior to English horses in bone and flesh; the same is true of all seen in the curiously constructed Irish cars, and I note here an exception to the generous character of the people—the horses are most cruelly treated. I have nowhere seen so hard beatings given—nowhere seen them so well deserved—nowhere seen them so little cared for.

Large estates are not so frequent along the way as in the neighbor isle, and where existing, are much more scrupulously guarded against encroachments, being surrounded with walls of huge height and thickness.

Not the least attractive features in a day's ride northward, are the bleaching fields of several large flax weaving establishments. Hundreds of acres of green lawn are covered with white linen—the surface of a bright stream seen at intervals between, and the gentleman proprietor's cottage or mansion seated in a group of trees amid it all; in the distance the hills curiously checkered with fresh growing wheat and new tilled lands, and way pasture grounds.

Over three thousand cattle are at the Smithfield fair to-day, and thousands and tens of thousands of slaughtered sheep and swine come up weekly from ever part of the country. Butchers even go to Lancashire to buy. Every hotel is full, and the consumption is immense. Rhubarb, asparagus, new potatoes, radishes, &c., abound in the market. Strawberries, cherries, and peaches, may also be had for money. Cucumbers have also been in the market since the first of April; they are a foot or more long, but no larger round than ordinary. The price varies from 25 cents to $2 each. Greater luxuries are by no means so cheap. Weather continues cold—colder than with you, I doubt not. Lilac and apple trees are just in bloom.

Truly yours,

D. G. MITCHELL.

LETTERS FROM MR. HORSFORD—No. V.

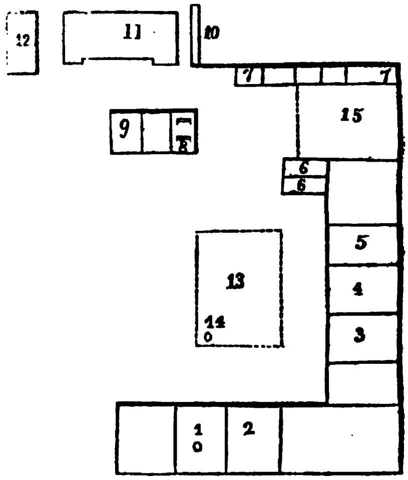
German Farming—Farm Buildings—Stock, Rotation of Crops, &c.

Giessen, March 14, 1845.

L. TUCKER, Esq.—Yesterday I visited, for the first time, in Germany, a—so called—*Econom*.* I have some hesitation in the employment of language to explain what I here observe and hear; first, because I may convey incorrect information; and second, because I may do injustice to the general land, in a very small state of which I happen to reside. What is quite true of Livingston county, in New-York, for example, might fail if applied to lands upon the Aroostook or in the Accomack district. And again, it is by no means grateful to hear the United States charged with being a repudiating, duelling, slaveholding nation, as I not unfrequently do. Distance, in lending enchantment to some views, draws a veil of indefiniteness and generalism over others. Englishmen and Europeans generally, know nothing of Mason and Dixon's line, and judging others by myself, a statement of what is observed in Hessia Darmstadt might be thought applicable to each of the remaining thirty-seven Germanic states—an application against which I here caution the reader of my communications.

An *Econom*, claims to be a scientific farmer; claims to employ the best practical methods for making a given number of acres, taking all his wants and relations into consideration, produce the largest amount of money. He has capital enough to take advantage of markets, to some extent, and proceeds upon something of a wholesale system. He has, however, no tenants, all his employè sleeping either in his own residence or in his barns. His daughters are eligible to presentation at the prince's court, and his sons to posts under government. He labors with his sons and his men, and has no stewards or other intermediate agents between himself and those with whom exchange of crops or products are made. Thus much have I concluded from an interview of a couple of hours yesterday, during which an econom conducted me through his suite of barns, folds, &c.

His residence was, earlier, the summer palace of the Prince of Brownfels, and may have an interest to some American readers, from having been the birth place of the heroine Charlotte, in the "Sorrows of Werter." It is beautifully situated at the head of a valley, closed in throughout a distance of nearly a mile, with a varied forest of evergreen, oak and maple. Like all the old houses, it is a frame work of wood, the interstices between the timbers of which are filled in with unburned bricks, and plastered or whitewashed without. The roof is of tile, and all the windows present in the sash the never changing form of the cross. Immediately about the dwelling were some hedges, but over the entire farm, as far as I could see, were no walls of separation, either of hedge, wood or stone. This is usual. The barns, sheep folds, swinery, kennels, ice house, wagon house, &c. surround a quadrangle about two hundred and eighty or three hundred feet in diameter, in the centre of which is a paved basin of about sixty feet by forty, for the reception of manure. The barns were of brick and wood, and roofed like the house. I will number in their order the several apartments and objects that I saw, and the following diagram will give their arrangement:



German Farmery.—(Fig. 69.)

1. A stable for cows, calves and yearlings, each secured by itself to a rack and manger, without intervening partitions. In the centre of the stall is a half hogshead for the preparation of food, which consists of chopped straw, pounded beets, and boiled potatoes. They are kept in the stable throughout the entire year. The calves have all the milk for the first six weeks, and are then fed with diluted milk, and gradually come to live upon the food given to the cows. The cows were rather small—not sleek, spiritless, varying dun brown and tawny colored creatures. 2. A similar stable occupied by about twenty-five large fine looking cows, and a bull, that would have shown well at Poughkeepsie last autumn. The cattle were long, with great depth, and like many fine bodied animals I have seen, had generally any thing but good horns. They were too long and slender, and curved irregularly. Among them all, the dun was the prevailing tint. 3. A stable for working cattle. Of these the number was not large—about a dozen. They looked well. The same apartment lodges two workmen. 4. A stable for breeding mares and colts. Of these no-

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* Every man is titled in Hessia. Here are some illustrations: [illegible] Prof. Dr. Bischoff, Merchant Labroise, Baker Berkman, Hair [illegible] so and so, Boot black so and so, Peasant, &c.

thing particularly interesting was noticed. They are decidedly inferior to all horses in New-York, of any pretensions to blood. 5. A stable for work horses. This and the last are paved, in common with the yard, with round small stone. All the horses were in fine condition, clean, well shod, with their tails tied up in what I suppose is fancied to be a pretty knot, to guard them from the mud of the roads at this season. Two workmen sleep here also. A little incident occurred here that diverted attention for a while from stalls and fodder. A "whiffet" that came to greet us at the entrance to the stable, had been entrusted, in the course of nature, with a beautiful second edition of herself, and the econom, to gratify us, took the little creature from the kennel, and held it awhile to look upon. The mother was no terrier, she could not growl; she was not of St. Bernard or Newfoundland stock—she could not trust; she was a cur—she could not be indifferent; she was a gentle little whiffet, blindly devoted to her offspring. Climbing to the top of a box near, she presented her petition with such eloquence as nature gave. She bowed, and crouched, and licked the coat of her master, and when he lowered the little charge so that she could assure herself of its safety, her eyes took on an expression, of which those who have only known curs and hounds in their rough sports can believe nothing. It is, perhaps, a trifling thing to notice, but what student of nature would deny himself such a volume of entertainment. Another was in store for me. On leaving the stable, the econom whistled as for a dog. In a moment the air above was filled with doves, and the fowls came trooping from all parts of the yard. Not receiving any grain, the doves returned. I thought they must have numbered some two hundred. I whistled a second time, and all flew down again. Opening one of the doors in the range 7. 7, out bounded a large dog, resembling a hyena more than an ordinary bull dog. He seemed to be overjoyed to see his master, but treated me as if I belonged somewhere else. He and two or three others are given the range of the yard and grounds at night. 6.6, and portions of 7.7, are swineries. I remember once seeing a picture in the *Cultivator* of what was called the "landshark." Here are the originals. I inquired if they were not bred from the wild swine which are still in some of the preserves in this vicinity. He assured me they were not. But, in truth, they are as widely contrasted with the Berkshire, the China, and what were once denominated the "grass breed pigs" of the Genesee Valley, almost as widely as the wild boar himself. 8. One of three sheep folds. It is a room with high ceiling, having straw on the bottom, and supplied with racks. The econom purchases wethers to fatten, and does not breed them. They are pastured when the ground is bare, and accompanied always by a shepherd and dog. The flock, of about two hundred, was all of young sheep, a year and a little more. Both lambs and calves generally are dropped a little before this date. Upon inquiry whether he thought it so well, he presumed the mortality among the ewes and lambs might be greater, though there were some advantages that I did not precisely comprehend. Their wool is coarse and long, though the bodies are finely formed, and still in the possession each of a long tail. I could not see any thing much above the common breed among us. 9. A carriage and wagon house. 10. A bee house. Little "cottages of straw" mounted upon other box hives of small dimensions, are the substitutes for the patent, most convenient hives, coming into use in New-York and Vermont. He says they are never annoyed by millers and worms. 11. The residence, with all its quaint antiquities, and its magazine of pipes and tobacco. 12. The distillery. Here alcohol is made from potatoes. First, the potatoes are fitted for mashing in a steam tub, then passed through a crushing apparatus into large tubs. Then comes the series of fermentations, gummy, sugar, and alcoholic. The alcohol condensed in a still yields a profit of about a dollar and a half, above the duties to the Prussian government. These are positively enormous, amounting to nearly sixty-three dollars a month. Naturally enough the closest surveillance is necessary in order to the collection of this revenue, and a *gens d'arme* visits the distillery at regular intervals, night and day, and requires a record of each hour's work. 13. The manure depot, so arranged as to receive the entire drainage of the stables. 14. A pump for elevating the urine to a hogshead, arranged something like our street watering carts, for the distribution of the fluid upon the fields. 15. A depot of straw. Heaped upon 13, is the litter of the stables, and all the sources of manure.

It is interesting to observe the connections which link the different parts of this econom's establishment together, and the profits which he compels all parts to yield. The cows he keeps for their manure principally, and therefore stables them. The potatoes he grows to feed his cows. Cheese, butter, milk and alcohol, are incidentals. The manure enriches the soils for the growth of wheat, rye, barley, beets, peas and beans, as well as potatoes. A portion of these support the stock, fatten the beeves and swine, and the remainder, after deducting the expenditures for the farm and the household, goes to swell the little store laid by for advanced age, for younger sons, or for luxuries. The econom attempted to explain his system of rotation, but so many of the terms employed were unintelligible to me that I have forgotten much of what he said. I think this is the plan he tries to carry out: First, potatoes; second, spring wheat; third, barley, or rye and clover; fourth, summer fallow and fall wheat; fifth, peas and lentils; then a year of repose, and then potatoes and the series again.

I hope to walk there again in the summer, and learn more definitely about the treatment of the crops.

Liebig's winter course of lectures is closed. The semi-annual dinner has been given, and the laboratory is shut for a month; at the termination of which the lectures will be resumed. More than half the students leave, and among them the first of the class. Spring seems close at hand, though we have several inches of snow on the ground, and the air is still cold.

E. N. Horsford.

MR. NORTON'S LETTERS—No. XIII.

Prof. Johnston's Lectures—Scotch Farming—Great Crops of Wheat, Oats and Turneps—Sulphuric Acid, Bones, &c.

Laboratory of Ag. Chem. Association,
Edinburgh, April 25th, 1845.

L. Tucker, Esq.—As I promised in my last a report of the second monthly meeting of the Association, I was happy to find that the subjects touched upon were such as are likely to be profitable to farmers in our own country. The meeting took place on the 9th of April, and was attended by a large number of gentlemen from various parts of the country.

After the usual preliminary business, Prof. Johnston made some remarks, suggested by a visit he had lately made to the farm of Mr. Aitchison, of Drummore, near Musselburgh, about ten miles south of this city. The farm consists of at least 800 acres, and lies upon the coal measures, the soil produced by the decomposition of which is generally considered very poor. In this instance however, art has overcome nature. Nearly the whole farm is now drained, and sub-soiled to the depth of 14 to 15 inches. Manure is added judiciously but most liberally, and the crops are remarkable. The cultivation of this farm has been so admirable in the hands of Mr. Aitchison's predecessors that it has alway yielded large crops. The records of these are shown in a book like a merchant's ledger, which has been kept with the greatest minuteness for more than 30 years. In it may be seen the produce of each field, the time of sowing, of harvesting, and finally the market at which each sample of grain was sold, with its price, and the average price of each year.

One six acre field produced an average of 42¼ tons of white globe turneps, per Scotch acre, every load being actually weighed. In 1844, 13 acres averaged 31 tons of yellow Swedes. The Scotch acre is one-fifth more than the English imperial acre. But this same land produced equally good crops twenty years ago. The wheat crop of 1820 averaged, over 150 acres, 54 bushels. In 1832, 140 acres of oats averaged 85¼ bushels per acre.

On land cultivated as this has long been, said Prof.

Johnston, all we can do is to keep up its fertility; even modern science can scarcely hope to increase the crops; but one thing it may do, it may raise them more economically and with greater certainty.

After this notice of Mr. Aitchison's farm, a variety of substances lately sent to the Laboratory for examination, were mentioned. Among them were a number of limestones from different parts of the country; some of these were found very pure and remarkably well fitted for agricultural purposes; others would make admirable cements. The economical value of some ironstones was also noticed. The sprouts broken off during the malting of barley, on analysis have been found to be well adapted for manure, and to especially abound in phosphates. Large quantities are obtained in the extensive breweries, and in some instances they have been advatageously used as food for pigs.

The remainder of the remarks by Prof. Johnston were devoted to explaining the action of sulphuric acid upon bones. The nature of bone was first considered, it consisting of an earthly and a gelatinous part. Each of these has been found valuable where applied singly; burned bones especially, have been found to produce excellent crops of turneps. The sulphuric acid acts upon both these parts of the bone, and forms with the gelatinous part certain compounds soluble in water and capable of entering directly into the circulation of plants. In its action upon the earthy part much gypsum is produced, and bi-phosphate or super-phosphate of lime.

Thus many substances necessary to the healthy growth of the crop, are presented to it in a soluble state ready to supply its wants. Experiments in top dressing wheat and clover, have shown in several instances the great efficacy of the bi-phosphate.

The action of the acid is speedy, and soon reduces the bones to a soft pulpy mass; they may then either be applied in a liquid state after very large dilution with water, or they may be dried and sown in the drill, or used as a top dressing. The latter way is most convenient, but some trials have seemed to indicate that the liquid application is best. It probably ensures a more complete dissemination of the manure through the soil. Water should be added, even until the acid taste is not perceptible. Prof. Johnston, in conclusion said, he had been thus particular upon the subject of bones, because the supply of guano could not always last. When that was gone the farmers must have something to supply its place, and bones will then stand forth more prominently. He recommended the trial with preliminary experiments with them immediately, so that they might not in any way expose themselves to loss when compelled to find a substitute for guano.

After a few words upon some samples of guano, the meeting came to a close. Prof. Johnston will be at Durham during the months of May and June, and consequently there will not be another meeting until July.

I am yours very truly,

JOHN P. NORTON.

PRESERVATION OF WOOD.—Kyan's celebrated patent, it is well known, consists of impregnating the pores of wood with corrosive sublimate. Bennett's Antiseptic Solution, for the same purpose, is a solution of one pound of chloride of zinc in five gallons of water, and has been found superior to Kyan's patent solution. Another simple process consists in the application of *creosote*, along with coal tar, and other bituminous matter. The wood is thoroughly saturated to the centre of the log with great rapidity. A load of fir timber will absorb forty gallons; close grained timber less. The price of the creosote is 3 pence [sterling] per gallon; in some places not more than 2½ pence. Preserved timber, by this process, is supplied for rail-roads at 15 shillings a load more than the common price. Wood treated in this way is said to become nearly water-proof, and requires no painting. [It will of course be understood that the "creosote" spoken of is not the article sold in the drug shops, which is very costly, but a much cruder substance, similar to the substance sold many years ago, for smoking hams, under the name of *pyroligneous acid.*]

Domestic Correspondence.

MARYLAND FARMING.

MR. EDITOR—In one of your last letters you requested me to give you a sketch of any farms I might visit in Maryland. Last summer I made a short visit to my friend THOMAS J. DORSETT, at "Roedown," in Anne Arundel county, West River settlement, Western Shore of Maryland. Mr. Dorsett has 400 acres, 100 wood and 300 arable land, divided into four fields; and he farms on the four course system. First, wheat after clover. Second, corn and tobacco—the latter always on the lightest and driest soil. Third, wheat on the tobacco stubble, and oats on the corn stubble. Fourth, clover. Product, 15 to 20 bushels wheat, 35 to 50 bushels corn, one hogshead tobacco, 40 bushels oats, per acre. Clover is the principal fertilizer. The land is remarkably adapted to clover, and since its introduction, some ten years or more, the land in this region has been progressively improving.

Mr. Dorsett drove me a circuit of twenty-five miles, between South and West river, over a fine undulating country, well farmed; and, with one or two exceptions, the land all laid down in clover, looking almost as well as the western lands of good quality, (for it is not all good, you know.) There are no lanes here, but gates on the public road. We passed through sixty-six of them in a drive of twenty-five miles.

Mr. Dorsett has some good stock. I saw two fine blooded brood mares, one of them, a Naragansett, a picture. Her colts are good, and sell for high prices. Also some good grade Durhams, a flock of mixed sheep, cross of the common, Merino, South-Down, and Leicester—forty-eight ewes and two rams. The clip averaged eight pounds and fourteen ounces, unwashed. One ewe that bore lambs for two years, gave a fleece which weighed twelve pounds. Finer mutton I have never tasted than at his table, from this flock.

Mr. Dorsett manages his own farm, and has made it very productive. His sales have amounted to $3,300 per annum. Baltimore is the principal market. Butter, and small marketing, is sold at Annapolis. He observes system in all of his farming operations, care of tools, implements, &c.

Doct. STEWART, whose farm adjoins, was from home, which deprived me of the pleasure of seeing him and his large farm of some two thousand acres. It is highly cultivated, as I saw in passing through it. I have made the Doctor a promise to visit him some future time. Slave labor is used in this neighborhood altogether.

Yesterday I returned from a visit to GEORGE PATTERSON, Esq. who resides at "Springfield," twenty-two miles west of this, in Carrol county. He is a wealthy gentleman, and is extensively known for his fine stock, and enterprising character. His farm contains 1735 acres, about 1200 under cultivation, and 500 in woodland. It is rolling land, and well watered—a branch of the Petapsco running through it, supplies water for a grist mill, on the farm, where all the grain raised on the farm is ground for the family and stock. The woodland is admirably located to shelter the many fields from the northwest winds, and presented a beautiful and diversified landscape. The timber was formerly oak, but as it is removed, is supplanted by a spontaneous growth of hickory and chestnut, principally the latter. Mr. Patterson has cut out much of the old timber to burn lime, and also with a view to get rid of it to admit the young growth of chestnut.

When Mr. P. took possession of this farm, twenty years since, the land was poor, much of it *very* poor, and barren of vegetation, except *briars*,—with scarcely any buildings. Since then he has put upwards of one hundred and sixty thousand bushels of lime on the land, and erected fifty buildings of various kinds, all permanently and neatly built, and now all yellow washed, presenting in contrast with the green fields and woods, a picturesque appearance. His plan is, whenever a field is brought into cultivation, and made to produce clover for mowing, to erect as many barracks as will hold the hay. These barracks, or barns, are made of frame, some 20 by 30 feet square, 12 or 14 high, weather boarded, and covered with cypress shingles.

Mr. Patterson commences on the poor worn out land by spreading two hundred bushels of lime per acre, (measured at the kiln unslacked,) on the surface, and lets it remain two or three years. Then breaks it up and puts whatever dung he can muster, and plants in corn. The following is his system of rotation:—First year, corn; second year, oats, rye or wheat, and clover sowed in the spring; third year, clover, first year mowed, second crop left on the ground; fourth year, clover either left on the ground or moderately grazed; fifth year, wheat, timothy sowed with the wheat; sixth year, timothy mowed; seventh year, timothy mowed; eighth year, grazed; ninth year, grazed, and top dressed the last four years. Top dressing he prefers to plowing in the manure of any kind. Lime, he thinks, acts slowly, and does not show much the first year or two, and should be always applied to *grass*, and not on fallow. Much of this land is now in a high state of cultivation—producing 20 to 30 bushels wheat, 60 to 80 bushels corn, and two to three tons hay, per acre. The contrast between this farm and some of the adjoining land is wonderful! The one green, and luxuriant in crops; the other barren, and devoid of vegetation, having no green thing except a few low running briars.

This land was also very stony. With the stones Mr. P. has turnpiked several roads across his farm, which enables him to haul wood, lime, and manure in wet weather. He has also applied a portion of these stone to making drains. He makes drains by cutting a ditch four feet deep, and filling two feet with fine broken stones. Swamps and swails heretofore useless, are now made dry, and are among the most productive parts of his land. The fences are in prime order—the few worm fences that he has, are eleven rails high, staked and ridered, and six feet worm. The greater part are post and post and rails—upwards of ten thousand pannel—posts of mountain locust. A few chestnut posts he has been compelled to use, and these he protects from decay by filling round with stone, which drain the water rapidly off.

His barns, where the greater part of the cattle and hogs are fed in the winter, are situated on two opposite knolls, and drains are so arranged as to convey the wash from both to permanent meadows adjoining.

His stock is all of the most approved kind, and pure in blood. Of horses, there are several full blood mares, of high pedigree and beauty. "Mary Randolph," a superb mare of rare good points, a gray, has a filly one year old, the handsomest creature I ever saw. He has in all some twenty-five or thirty fine horses of various ages. At present, he is about crossing these mares with a large well formed horse, a cross of the Canadian—similar to the Morgan horse—with the view of increasing the size more suitable for carriage or draft horses. His herd of Devon cattle, about sixty in number, are a rare lot. I had heard of the Devon cattle, and seen the prints representing them; but I had *no idea* of their beauty. The prints, or some of them, are *carricatures*, at least of Mr. Patterson's best cattle. His bull "Eclipse," imported two or three years since, now five years old, is a perfect gem, the best bull of *any* stock, not excepting my old favorites, the Durhams, that I have ever seen. The cows have fine shaped and well developed udders, and must be good milkers. Mr. Patterson says they give rich milk, and a good deal of it. He has bred his stock with that object, and selected the best milking families. They have size enough—the bull would weigh 1000 lbs. nett beef—the cows are also large enough. They have fine shaped yellow noses, with a ring of the same round the eye—all uniform as so many peas. What will you think if I tell you that this will become the favorite stock before many years? The beef, you know, is celebrated for its fine quality, being so evenly mixed, fat and lean, instead of laying the fat on the surface.

Here I also saw upwards of seventy Berkshire store hogs—*hog fat*, in the clover field—and as many sucking pigs, intended for next year. The sows are allowed but one litter each year, and they all have pigs in May. Mr. P. has a fine flock of sheep—some full blood Downs from the flocks of Mr. Rotch, N. Y., and Cope, of Pennsylvania.

Every thing is done here in the best manner, and all the stock is of the *best*, without regard to price. The whole establishment is well worth one hundred thousand dollars. I have not done credit in the description. Mr. Patterson manages the farm himself—has no white man on the place but himself, and is a pattern in industry and frugality, even to Pennsylvania farmers. His neighbors are beginning to follow his example in the use of lime. A few years hence will have completed Mr. Patterson's plans of improvement, and then he will have the best farm in Maryland.

ISAAC DILLON.

Eutaw House, Baltimore, 20th May, 1845.

THE LAKE COUNTY SAND WASHED OUT OF SOLON ROBINSON'S EYES.

MR. EDITOR—My object in writing is, to correct some remarks in the April No. of the Cultivator, page 125, by Solon Robinson, touching this place, which, from the known character of your correspondent, as well as that of the Cultivator, we in this place feel is calculated to do us much injustice. We do not charge Mr. R. with intentional misrepresentation; but this does not alter the effect his remarks are calculated to have upon many of your readers to the injury of this place. We would say, however, that he must have been misinformed, or have formed his opinion of the people without knowing their character; and as to some other remarks of his, we think he must have had his eyes shut, or filled with Lake county sand, for had his vision been clear he would have received other impressions. He says "this place is located upon good prairie;" which is correct; but how he could say "inconvenient to mills," we suckers think mighty strange. A steam saw mill, also a flouring mill, has been in full operation for some four years within fifty rods of where Mr. R. lodged.

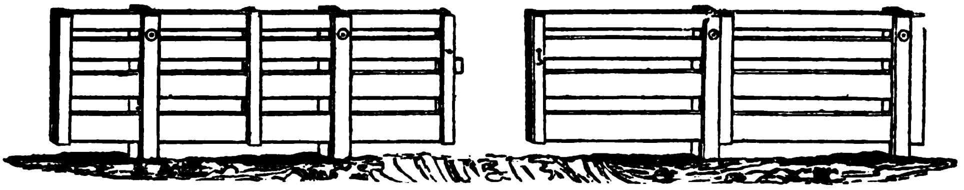
Mr. R. seems wonderfully taken up with the yankees, but just tell him we are all suckers here, although we came, some from old, some from New England, some from New Jersey, and some from old Kaintuck, forming a compound that finds it may be equal, yet not superior in industry, intelligence and virtue. Your correspondent says we never read agricultural papers here. For his information I will state that there are 28 copies of the Cultivator and Prairie Farmer taken at this office, and as money does not grow on bushes even in this productive land, it is not reasonable to suppose that we take these merely for waste paper.

This place was first settled about the same time as Bunker Hill; and I will say that "in this eight year old settlement" we now have three public schools in this village, one of from forty to fifty scholars three-fourth's of a mile distant, two Sabbath schools, two meeting houses and worship in each every Sabbath; a temperance society, with 147 signatures to the pledge; a Bible society which has sold and distributed nearly 350 copies of the New and Old Testament, since January, '44. We have two public houses where the weary can find rest. Intoxicating liquor is not sold in the village, nor nearer than Bunker Hill, that I am aware of. There are seventy-five subscribers to newspapers and periodicals at this office. These are facts, Mr. R.; but not the half that might be said. You did not observe those shade trees by the road side and around our dwellings—eh? and those fruit trees in our gardens and orchards? did not notice our Durham cattle—our flocks of sheep; call on us next time, and let us take you by the hand, and let us show you some of *our* orchards, grass lots, barns, good horses; more scholars at school, and more readers of agricultural papers than there is in some of the oldest settlements in the state where the population is double.

I will close this epistle, Mr. Editor, after calling your attention and that of the public to a review by a subscriber, in the April No. of the Prairie Farmer, of remarks made in the March No., same paper, by Mr. Robinson.

JONA. HUGGINS, P. M.

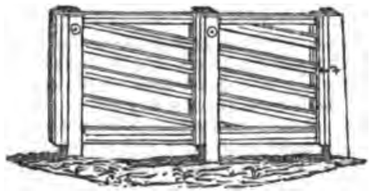
Woodburn, Macoupin county, Ill., May 12, 1845.



BAKER'S PATENT FARM GATE.—(Fig. 70.)

Mr. Tucker—I take the liberty of forwarding to you for insertion in the *Cultivator* a cut of a gate invented and patented by Mr. Anson Baker, of Western. This gate was first constructed by Mr. B. about a year ago, since which time several of them have been used by farmers in Western and the adjoining towns. The above cut (fig. 70) is a tolerably fair representation of the gate with one of the posts partially open. The construction is simple, being in fact nothing more than two lengths of board fence placed on rollers in such manner as to open right and left with the application of very little force. These gates may be made of inch boards, either planed and painted neatly, or rough, like the common fence, at a trifling expense compared with the cost of almost any other gate now in use. The posts should be firmly and perpendicularly set, but they will retain their position far better than when the gate swings in the ordinary way. The posts may be in one piece, with a tongue or piece sawed out even with the ground, or a batten may be placed on one side and fastened by pins or bolts through the post, one of which may pass through the roller. The rollers may be of wood or iron, but wooden rollers, which cost by the quantity from four to six cents for each gate, have been found quite durable, and answer a good purpose. The diameter of the roller should be such as to correspond with the size of the post, and the space between the boards be just the diameter of the roller, to prevent the gate from raising at the back end when weight happens to be applied to the other. When in its natural position it is self balancing, and always in order.

Mr. Baker claims for this gate several important advantages, among which may be named cheapness of construction, costing no more than half the price of any other good gate; and convenience of opening, particularly in winter, as they are always in place, and do not have to be *carried* open by main strength, and are not troubled by snow.



Self-shutting Gate.—(*Fig.* 71.)

The cut (fig. 71) represents a self-shutting gate, very convenient for yards, gardens, &c.; answering, in fact, all purposes where a small gate is wanted. The engraving will readily show its form, and enable any one to understand its principles. When opened, the inclination of the boards or slats on the rollers causes it at once to resume its proper position.

It is proper to add, that the above named gates have been used by many of the best farmers in Western, among whom Mr. Baker refers to George Brayton, Esq., Hon. Arnon Comstock, David Utley, Esq., and others, who have had them in use, for evidence of their utility. Of the importance of having a gate which combines cheapness, convenience and durability, it is not necessary for me to speak, as these things are fully understood by all good farmers. If on trial this gate shall answer the expectation of its inventor, the public will not be slow to adopt it. E. Comstock.

Rome, N. Y., June 6th, 1845.

ECONOMICAL WAY OF MAKING MANURE, &c.

Luther Tucker, Esq.—The writer, agreeably with his promise, will now give you the simple method by which, during the past winter, he collected a much larger quantity of manure than he has heretofore done; and which, his present crops are showing the advantage of.

He will premise, by saying, that his stock were well fed, housed and bedded with leaves; and gave evident proof of the valne of proper care.

Immediately behind each row of dairy cows, is a wood gutter, 12 inches wide, 4 inches deep, and running the length of the stable, which receives the droppings from the cattle; and as the gutter is laid a little sloping, the liquor passes, and (with the use of a scraper) the dung is readily removed into a pit on the outside of the stable, which is thus kept clean.

The pits are 2 feet deep at each end, and rather more in the centre, where an old oil cask, containing about 200 gallons, is sunk into the ground, so that one-half the cask is below the bottom of the pit; here augur holes are made in the cask, by which the pits can be drained at pleasure.

The pits are half filled with muck from the adjoining woods, (mostly old decayed leaves or vegetable mould,) and over it is spread a good coat of plaster: on this layer of muck, the gutters empty themselves.

About once a week, a man occupies half an hour in leveling the heaps, and thoroughly soaking them with the liquor from the casks; at the same time sprinkling over a little plaster to prevent any offensive smell.

As soon as the muck is sufficiently covered with manure, a fresh layer is laid on, and in this way the pits are filled with alternate layers of muck and manure.

There is no waste of liquor, as what is not absorbed by the heap passes through it to the bottom of the pit, and again into the cask. During the past winter, we had not only sufficient to saturate all the materials we had leisure to collect, but were able to haul out several hundred gallons to the grass lands.

On the pits requiring emptying, their contents were *compactly* stacked where wanted for spring use, and on being opened contained a mass of rich manure, collected as you will see at a very trifling outlay; a few bushels of plaster being the only ingredient not furnished by the farm.

The writer, at leisure, proposes giving you his plan for winter feeding—a subject to which he has directed his attention, with a view to economy in food—producing good milk and butter; and the saving of cost in exchanging dry for fresh cows; at the same time he desires not to occupy your columns to the exclusion of more interesting matter. Woodside.

N. B. Crops of Grass very short from the limited rain the last three months; cutting generally commenced round the city, (Balt.) The crops of broad-cast corn referred to in my last, although checked for want of moisture, now 18 inches high; the ground well covered, and the corn and oats in a fine healthy state.

On 3 acres of ground, laid out in furrows (north and south) 3 feet apart and well manured, the writer has planted 2 rows of corn, with hills 2 feet 6 apart, giving 5,808 hills to the acre; then 2 rows of potatoes, and so on alternately; there being 9 feet between each double row of corn; it is presumed it will have as much sun and air as though planted as usual, 4 feet by 4 feet (2,722 hills to the acre) and that the opening of 9 feet will prevent injury to the potatoes—both crops have been well cultivated and plastered, and appear in a very thriving state. If the plan succeeds, the 3 acres of land would give one and a half acre of potatoes and equal to 3 acres of corn planted 4 feet by 4 feet—whether it succeeds or not, I propose giving you the result. In the one case, it may induce others to try it for themselves; in the other, spare them the trouble of doing so.

Maryland, June 7th, 1845.

GESTATION OF COWS.

Mr. Editor—While living on my farm, I found it not only useful, but very necessary, to keep a record of the time my cows were put to the bull, as well as the time of calving. By the means of keeping a record, I was enabled to make a calculation on the probable period parturition would take place, and be prepared for the event, and avoid accidents which might occur, when no attention was paid to the subject.

The experiments and facts which I am about to state, may not be considered of much importance to farmers generally, but to the breeders of cattle, and the inquiring mind, they may, I trust, be interesting; and some good may possibly result from their publicity.

Earl Spencer, in a paper communicated to the "Journal of the Royal Agricultural Society of England," says the shortest period of gestation, which a live calf was produced, was 220 days; and the longest 313—difference 93 days.

M. Tessier, in a memoir read to the Royal Academy of Sciences at Paris, says that in 1,131 cows, which he had the opportunity of observing, the shortest period of gestation was 240 days; and the longest 321—difference 81 days.

Both of the foregoing statements differ from my experience. Among my cows, though numbering only 62, the shortest period of gestation was 213 days, and the longest period was 336—difference 123 days. But as regards the shortest period of 213 days, I must confess I have had my doubts as to the correctness, though I kept the record myself, for in no other instance have they fallen below 260 days.

It would appear from the Earl's statements, that a calf produced at an earlier period than 260 days, must be considered decidedly premature; and any calf produced at any period of gestation exceeding 300 days must also be considered irregular, but in this latter case the health of the produced is not affected.

There are some facts presented in my record which differ from any statements which have fallen under my observation. For instance, in 1839 I had fourteen cows, three of which produced heifer calves; and the period of gestation averaging 284 days, while the other seven produced males, and averaged 280 days. This, in regard to the time allowed for males and females, is contrary to the prevalent belief among farmers, and differs very materially from the result of the following year, 1840. I had that year thirteen cows, six of which produced heifer calves, whose period of gestation averaged 278 days; and seven produced bull calves, averaging 299 days; the shortest period of the heifer calves was 213 days, and the longest 336 days; being the greatest extremes of either year. The shortest period of the bulls was 278, and the longest period was 289 days. In this year the number of males and females were nearly balanced.

The next year, 1841, eleven cows produced eight heifer and three bull calves. The shortest period of gestation for the heifer calves, was 277 and the longest 292 days—averaging 286 days. For the bull calves the shortest period of gestation was 284, and the longest 299 days—averaging 293 days.

In 1842, the order seemed to be reversed; for out of thirteen cows, nine produced males, and four females. The shortest for the males was 281, and the longest 294, averaging 287 days. There was but very little difference in the time for the females; the shortest period being 280, and the longest 286—averaging 284 days.

In 1843, the proportion of males to females, was, as in 1840, nearly balanced. From eleven cows, six male and five female calves were produced. The shortest period for the males was 277, and the longest 290—averaging 282 days; and the shortest period for the females was 276, the longest 286—averaging 282 days.

In the five years, which embraced my experiments, sixty-two cows produced twenty-six females, and thirty-six male calves; the period of gestation for the bull calves, averaging 288 days, while the heifers averaged nearly 283 days.

In the experiments of Earl Spencer, those cows whose period exceeded 286 days, the number of females was only 90, while the number of males was 150. Now, in my experiments, those cows that exceeded 286 days, the number of females was 7, while that of the males was 12. The number of female calves produced under 283 days was 24, while that of the males was 31. In most cases, therefore, 283 or 288 days may be assumed as the usual period for gestation, and not 270 days, as stated in Youatt's work on cattle.

My experiments were not confined to any particular breed or variety of cattle—they consisted of Durham, Devon, Herefords, Ayrshires and grades; and I think these results, though derived from the observation of one person only, will be found equally applicable; at any rate, we should be pleased to hear the results of others.

C. N. Bement.

American Hotel, Albany, July, 1845.

CULTIVATION OF FRUIT.

Mr. Tucker—Among the various objects that engage the attention of the agriculturist, few have higher claims upon his care than the cultivation of fruit. When man was fresh from the hands of his maker, the fruits of his garden became the sole objects of his culture, as they constituted his entire, yet ample means of subsistence. Health, vigor and longevity resulted from this simple fare; and there can hardly be a doubt that even at this day, a nearer approach to this primitive simplicity of diet would contribute much to the preservation of health and happiness among mankind. When we consider the great and constantly increasing varieties of fruit that are capable of being cultivated in our climate; their wonderful capacity for improvement; the elegance of form and beauty of color displayed by many of them; and above all their delightful fragrance and exquisite flavor; it may well be asked, what objects demand our more constant and fostering care? Nor is the value of fruit at all lessened when we view it as a means of increasing our wealth. If our farmers, with their present very meagre and imperfect collections of fruit, have often found the produce of the orchard among the most valuable of crops, what may they not expect when the best and most profitable varieties come to be the objects of their culture? In this region we can boast of but few apples of decided value, and until a recent period we had but one superior and some half dozen tolerable pears. Of the best of apples, and of those exquisite productions of the pear kind, with which the science and skill of a few individuals have enriched the world within the last half century, we are yet to become partakers. The peach and the plum had almost become extinct among us for want of a sufficient knowledge in their culture to counteract their diseases, and to protect them from the depredations of insects. Their best varieties have never been seen here at all. These defects in our system of rural economy cannot fail of being amended when the attention of the public can be sufficiently awakened to their existence; since it is not so much the remedy, as the determination and skill to use it, that is wanting.

But the principal design of this communication is to lay before the public some observations that have lately been made in the culture of a few particular varieties of fruit. In the contiguous counties of Westchester and Fairfield, and probably over a considerably wider extent of surface, the Newtown Pippin tree has never worn the healthy and flourishing appearance of the other cultivated sorts. It is slow of growth, and the bark of even young trees has a peculiarly rough and perforated appearance, as if often traversed by the woodpecker. For many years its fruit has been gradually deteriorating until it has become in many orchards nearly worthless. So generally indeed is this the case that cultivators are about abandoning it as one of the wornout varieties, considering it stricken with the incurable degeneracy of age. That such an opinion however is not well founded, may be inferred from the fact that this fruit, when grown in the new and more virgin soils of the interior, is to this day fairer and larger than we have ever been accustomed to see it here. This fact would seem to indicate, not the degeneracy of the tree itself, but the want of something in the soil to enable it to bring out its fruit in full perfection. Some other of the older varieties of apples have degenerated much within the last twenty or thirty years. The same thing has happened to some of the choicest pears. The White Doyenne, or Virgalieu, until recently the only superior variety ever cultivated here, has for twenty years ceased to ripen its fruit. The tree itself seems healthy, but its fruit commences cracking when half grown; becomes woody, and scarcely a pear has ripened on these trees for nearly a quarter of a century, with the exception of the last two years. Year before last a few, and last year a greater proportion of these pears came to perfection. Here again the soil has lacked something that this tree required in ripening its fruit; and the favorable change observed last year would seem to indicate that this material, whatever it is, which after a long period had been exhausted by the annual fructification, has, after a lapse of twenty years, accumulated again in quantity sufficient to bring some of its fruit to perfection. The Seckel pear, a most delicious fruit, having but recently been introduced here, ripens with us in great perfection; but at Philadelphia, where the tree originated about a century ago, probably from a seed of the Rousselet de Rheims, which it greatly resembles, the Seckel has begun to suffer from exhaustion of its appropriate food, and requires an artificial supply to restore it to its wonted perfection. This fact I learn from Mr. L. C. Ford, of Olney Park, accompanied with the valuable information that the material wanted in this case was some ferruginous compound, as by giving a liberal supply of slag from the iron foundry to the roots of his trees, he has restored its fruit to more than its pristine excellence.

With regard to the Newtown pippin, I am in possession of facts showing that our soil requires only some compound of lime, probably the phosphate, to enable it to bring this apple to full perfection. The details of this discovery would extend this article to an inconvenient length, but they will cheerfully be given to any gentleman requiring them. One of the facts upon which this opinion is based, goes to show that an old and decaying Newtown pippin tree, which in 1840, bore chiefly small, rusted and valueless fruit, in 1842 presented a healthy and flourishing appearance, and commenced bearing large, fair and beautiful apples, and has done the same every year since; under no other treatment than that of having the clam and oyster shells from the table of the family deposited under it, which has been done from the date first mentioned up to the present time. This spring the tree has a very fine appearance, and is preparing for a heavy crop. It is worthy of notice that the very next tree in the row is likewise a Newtown pippin, which still continues to bear very inferior fruit, fit only for cider.

Most of the fruit trees will grow and bear fruit in any tolerable soil, but to produce it in full perfection, many of the choicer kinds probably require materials with which the earth in this region is but sparingly provided. If every different species of vegetation requires its own appropriate food; if corn, wheat, rye, &c., in two or three successive crops exhaust the silicate of potash, or some other sparingly provided material, essential to their growth, and can no longer be cultivated in the same fields until time, or the hand of man, has restored what is wanting; it surely need not excite our wonder that a tree, fixed to the same locality, and drawing all the materials of its subsistence from a few feet of ground, should, in the lapse of fifty or a hundred years, exhaust those sparse and delicate materials essential to the perfection of its fruit; and struggling with adverse circumstances, continue for a long period afterwards to bring forth only fruit of a very inferior kind. To this cause, rather than to antiquity of origin, we may probably ascribe the failure of some of our favorite fruits. The Rousselet, for instance, long so highly prized by the confectioners in France, is now said to be rapidly failing in that country; but having been introduced into this town about fourteen years since, in mistake for the Seckel, is found to be a vigorous and rapid growing tree, producing excellent fruit. This is certainly an important subject, and deserves further investigation. May we not hope that a series of well directed experiments, with careful observation, will eventually yield the agriculturist that intimate knowledge of the requirments of the plants and trees he cultivates, that shall enable him, by supplying their individual wants, not only to recover, but to exceed the former perfection of the now deteriorated fruits?

THOMAS CLOSE.

Portchester, Westchester county, N. Y.

THE SHEPHERD'S DOG.

MR. TUCKER—SIR—You may inform your correspondent "J. P. M.," that Isaac Hardy, Esq. of Lasalle, Lasalle Co., Illinois, owns a flock of some fifteen hundred or two thousand sheep, which are under the entire management of a Scotch shepherd and his dogs, who imported a pair from Scotland, thorough bred animals; from these he has now, I think, twenty or thirty in train, and for sale. Your Feburary number for 1844, contains a faithful picture of an animal that Mr. Hardy sent me last year. We have proved his skill among our flocks in driving on the road, and must say he is worth two men. There is no need of bawling, whipping or running; you may ride in your carriage, and the dog will, very dexterously and quietly, conduct them along fifteen miles, one hour earlier than they can be driven by two boys or men.

Nathan Hardy, of Monkton, (Vt.,) has a slut of this stock, and may be able to furnish them.

In a state containing so many sheep as Vermont, I am surprised that we have not bred the shepherd's dog, more especially when we find so many worthless dogs among us. Yours truly, SOLO. W. JEWETT.

WOOL DEPOT AT KINDERHOOK.

MR. TUCKER—I wish to call the attention of wool growers to the advertisement of H. BLANCHARD, of Kinderhook, in the last No. of the Cultivator, and to recommend it to their particular attention. The disadvantages of having to sell our wool to agents and speculators, have long been a subject of general complaint; but no plan has heretofore been devised, that promises any satisfactory improvement. Mr. Blanchard's plan will enable the farmer to place his wool where a large number of manufacturers will examine it personally, and many of them are pleged to give that depot the preference; and nothing will intervene between what the manufacturer is willing to pay, and what the farmer receives, but the commission paid the agent.

The establishment is to be conducted upon strictly fair and honorable principles, in order to give it character among the manufacturers; the interest of the agent as well as the grower being equally concerned in such a course. The larger the amount of wool deposited, the greater the inducement for manufacturers to visit it; and I think wool from other counties would find a much better and readier market there, than in the wool houses of the grower. The principal objection of persons from a distance will probably be, the responsibility, capability, and integrity of the agent; to such, I have to say, all is right on those points; and as evidence of its truth, will state that about ten thousand fleeces are pleged to Mr. Blanchard, from the single town of Canaan.

There can be no doubt that many advantages will be derived, not only to the wool grower, but to the manufacturer, which I have not time to mention, but which will readily occur to intelligent minds. Any farther particulars in regard to the plan, may be obtained by addressing H. Blanchard, Kinderhook, Columbia County, N. Y. DANIEL S. CURTIS.

Canaan, June 12th, 1845.

RUST IN WHEAT.

MR. TUCKER—In my peregrinations, I often meet with practical men, who still believe that rust in wheat is occasioned by the fungus tribe, whose minute seeds are wafted abroad by a moist and foggy atmosphere from Barberry and bramble bushes, where they are grown on their native pastures, as it would appear for the very purpose of destroying the hopes of the husbandman. But since the doctrine of cause and effect is beginning to be better understood, it may be hoped that this, one of the most pernicious errors ever entertained, may also become extinct. That the rust and every other disease in wheat, as in everything else, is the *effect* of a *cause*, is a grand discovery, and must lead to the most important results, as man will no longer grovel in the dark, but feel himself competent to cope with the evil on plain ground, and the mastery will be his.

I was, the last week, spending an evening with a very intelligent farmer, who had lately embraced this doctrine, and he does indeed rejoice in the light afforded him. He no longer trembles at the sight of a barberry bush, but when a blight takes place, looks back for the cause, and is pretty sure to find it in his diary, where is kept a daily account of the weather and its prognostics, and on turning to it to show me how truly the *cause* always precedes the *effect*, I saw, often repeated, the following entry: "A sharp wind from the north-east this morning; look out for blight in some shape or other;" and if, at the time of blossoming or ripening of the grain, foggy and damp weather prevailed, I more than once observed the remark, "the value of grain has risen about five per cent. to-night," and my friend has grown so confident as to believe he can, by care and fore-sight, prevent about one-half the evil that he has hitherto encountered in this way, and is enabled to account for the other half in a rational and satisfactory manner, and this to him is equal to the value of the whole. I found also, that he had made some very interesting observations on a popular work that treats expressly on this subject, exactly in keeping with this new view of cause and effect, which I have prevailed upon him to allow me to copy, and present, with your permission, for publication in the pages of the Cultivator.

In Vancouver's Survey of Devonshire, England, there is a letter from a clergyman, addressed to the Surveyor, in which the rust in wheat is uniformly ascribed to the influence of the barberry, bramble, and about half a dozen other shrubs and trees, and even grasses, on which fungi are produced; the seeds of which are scattered for miles by the first spring breezes, provided they are accompanied with moisture or fog. He says: "The fungus having arrived at maturity in the spring on certain shrubs, bushes and plants, is taken up by the first humid atmosphere and wafted into the adjoining fields where the wheat under the *western* hedge is sure to suffer the most: the seeds being so minute and exceedingly light as to be wafted by every breeze, when accompanied by moisture or fogs." Now how curious! that these minute seeds should be scattered by the very winds that are most unfavorable to their flight; for a moist breeze would assuredly deposit them instantly on the earth; and why is it, that the wheat under the *western* hedge is most likely to suffer? are there more barberry bushes in western hedges than any other? rather is it not because of its eastern exposure, to that quarter from whence the blighting blast proceeds? We all know that some years have no blight or rust, and yet these obnoxious bushes retain their positions, whether in the western or other hedges, which in those seasons when rust prevails the most, the early sown wheat is always least affected; this being universally the case, as shown by the Surveyor himself, for in the chapter on wheat he uniformly ascribes the rust and mildew to weakness or tenderness in consequence of late sowing and bad situations; and this throughout the whole seven districts which he is surveying. He says, "District No. 1. The mildew or rust is but little known, except in small enclosures and low situations, where the crop is excluded from a free circulation of air in the higher parts of the country, where the fields are large and the division-mounds are covered only with dwarf hazel or willow and creeping brambles, the evil is by no means such as to require particular notice. District No. 2. Wheat has frequently been sown after turneps, but on account of its being so very liable to the rust when sown at that late season, barley is becoming its more valuable substitute. District No. 3. The rust or mildew is a disease seldom known in this district, except on wheat sown after potatoes, (late sown.) District No. 4. Late sown wheat is found to be peculiarly subject to rust or mildew, and is much complained of. District No. 5. Wheat sown late is always more or less injured by rust or mildew. District No. 6. When turneps fail, the land is sown with wheat, the early sown crops of which are the best sample, and by far the freer from rust or mildew. District No. 7. The late sown wheat is always very liable to rust or mildew."

Now, after this, who would go and thrust his head into barberry or bramble bushes to seek for the cause of rust or mildew? while it is particularly worthy of remark, that the willow and bramble grow harmlessly on the "division-mounds of large enclosures," although these are amongst the accursed fungi-bearing tribes, enumerated by the surveyor's reverend correspondent; and who himself adds, "In low situations and small enclosures, where there is a want of due circulation of air, the rust has been noticed to make a sudden appearance after foggy weather;" and how is it, if the rust is occasioned by the seeds of fungi, which sail against wind and weather, that the late sown wheat is always sure to catch them? The reverend gentleman says, "In damp weather its seeds are more immediately received into the leaves of trees and shrubs, together with their barks and fruits, through the medium of those valves and *mouths* with which nature has endowed them for the admission of moisture." Then it would appear, either that the young wheat plants have larger mouths than the older ones, or that they are so inexperienced as not to know when to keep them shut, but, like children, must always be tasting! Unhappy urchins! see what comes of indulging the appetite! The rust, unlike the tempter of man, who goes roaring about seeking whom he may devour, prowls out on the first humid breezes of spring, tantalizing the little tender plants to take a sip at pleasure's fount, and down they go to perdition.

See here now, the effects of ignorance and superstition. Instead of viewing things in a rational way, we are seeking for the most improbable modes of accounting for the commonest occurrences; and if a cold wind in the spring nips vegetation, causing the young and tender plants and the most exposed, to feel it the worst, the mischief, forsooth, must be done by fungi, which have been sitting on some barberry or bramble bush, "to sally forth on the first humid breezes of the spring, to be the destroyers of thousands of acres of those golden sheaves, which are the husbandman's hope, and the staff of life."

CHARLES HAMILTON.

Chester county, Pa., March, 1845.

SETTING POSTS—FENCES—HARROWS.

MR. TUCKER—Posts for fences or other purposes, set into the ground, will last double the length of time by being put into the middle of the hole. The space around the post filled with small stones instead of earth, the earth does not come in contact with the post, and air is also admitted into the hole, both of which probably tend to prevent decay. In constructing fences, the earth taken from the hole is placed directly under the line of the fence, thus forming a ridge which is a saving equal to twelve feet of boards in four lengths of fence. The stones should be raised three or four inches around the post above the surface of the ground. The posts will not be very firm at first, but after standing through one winter their firmness will be much increased, and will continue to increase for several years.

A post and rail fence constructed in this way forty-five years since, in the vicinity of Boston, is now standing, with the exception of one post, and will probably stand a dozen years more.

The common zig zag rail fence is much more durable with upright stakes than with cross stakes. My method is, to connect the stakes before the top rail is put in, with iron wire, say one-fourth of an inch in diameter, which is done after the stakes are set by bringing the tops of the stakes as near together as the fence will admit; then take the measurement with a cord, which will show the length to cut the wire, which is easily done with a cold chisel; the ends of the wire are then hooked around each stake; the top rail being then put in, completes the fence. With an iron a foot or more in length, with a hole near one end to admit the end of the wire, the operation is quickly performed. This is a much cheaper method of securing upright stakes than the usual way with a piece of scantling.

The Harrow, whether square or triangle, should be constructed entirely of iron, (except the points of the teeth, which are steel); bars of iron of proper thickness, width and weight, are selected and welded together so as to form the desired shape for the frame; the tops of the teeth being rounded about an inch down, pass through the iron plate or frame, and are made fast on the upper side by a nut. The teeth in this way are always kept tight, which is very difficult in a wood framed harrow. With the exception of the teeth, a harrow thus constructed will endure a century without being housed.

A Farmer.

GRASSES FOR THE SOUTH.

Editor of the Cultivator—Your correspondents frequently inquire respecting the grasses suitable to the south. If each would communicate what he has observed, it would be a sufficient answer to such inquiries, and might prove the most important benefit to the agriculture of the south. During this winter I have seen bundles of *northern hay* brought to the stables of my neighbor, which had paid for carriage many hundred miles round the capes of Florida, through the Gulf of Mexico, and five hundred miles (by the course of the river) into the interior. This is a *standing reproach* to the agriculture of the south.

Lucerne.—This is found to grow well here. Sow it in drills, in the early part of the fall, 24 to 27 inches apart; it flourishes, yields four to five cuttings in the course of the year; and on soil which would bring 20 bushels of corn to the acre, grows one foot and a half high. This season, some was cut on the 12th of March, for soiling; and was then from a foot to knee high. The most of it has been cut twice over, since the first cutting, to this day, May 13. Cattle and horses eat it greedily; a cow, fed on it chiefly, is yielding at this time between five and six gallons of milk daily; when as yet there is no grass in the woods or on the common, sufficient to change the poverty-stricken appearance of the cattle in "the range." I have made no hay from it; but have no doubt it will make good hay.

Guinea Grass.—The root is similar to that of the cane or reed, and is perennial. The stem and blade are like those of the Egyptian Millet. On rich soil it is very luxuriant, yielding many cuttings in the course of the year. It is good for soiling—horses and cattle eat it readily, and, if cut when in flower, it makes a hay most abundantly, of which cattle feed greedily in winter. Horses do not seem to like the hay. It is most readily propagated by the root. A small root, two inches long, with one or more joints to it, will vegetate; and, if the ground is made loose by plowing once or twice during the season after planting, roots placed in checks of four feet will take *complete possession of the soil the first season;* so that the next spring it will start up evenly over the soil everywhere. Hogs root after them with great eagerness; and as the tendency of this plant is to fill the ground with roots in so thick a mat that the grass does not grow [illegible] n consequence, the idea suggests itself of pasturing [illegible] on this grass in the spring and summer, and giving [illegible] the benefit of the roots in the winter. They [illegible] destroy it; the smallest fibre left in the ground [illegible]. It might be a great pest in a *garden;* but if [illegible] be used for stock it will take and maintain [illegible]ssession to the exclusion of any competitor which [illegible] n middle Alabama.

[illegible] **and Herd's Grass.**—I have now a beautiful lot of these grasses in conjunction, on high land; the whole about knee high, and the clover in flower. Mr. Kirby, one of my neighbors, cut the wood from a piece of low, pipe clay, crawfish land, last winter; and when the brush, &c., lying on the ground, had become sufficiently dry, he set fire to it and burnt it all off; thus giving it a top dressing of ashes. He then sowed Herd's grass on the top of the ground, without plow, harrow, or any thing of the kind. He now has a most rich and beautiful crop of this grass growing. If desired, your readers may obtain further particulars of this crop.

Leersia Orizoides, (rice grass.)—This plant so much resembles *rice* that only a practiced eye can distinguish them. The negroes on the rice plantations in Carolina call it "*the rice's cousin.*" It will grow wherever rice will—*in the water*, or in any damp situation. It is found wild in all the southern country; grows tall, seeds in a panicle not unlike a head of oats, and will yield two crops a year of *choice hay*. Roots perennial. B. M.

Tuskaloosa, Ala., May 13, 1845.

TREATMENT OF SHEEP AFTER SHEARING.

Mr. Tucker—The directions for a "compound for smearing sheep," that is given in your last number, leads me to make the following remarks respecting the treatment of sheep generally after shearing. There is nothing conduces to the general health and comfort of sheep at this season more than a clean skin; any application that has that tendency will be of service; any thing to the contrary must injure them, and the growth and quality of their wool, in a greater or less degree. Smearing of any kind is injurious at any season, but particularly so after shearing, when the wool is short; it stops the pores, checks the growth of the wool, and leaves it dry and brittle, far into the season. If when sheep are shearing, there is a large hogshead of *very strong* brine made, and as the sheep are shorn they are taken to it, and while one man holds the sheep, another takes a strong *scrubbing brush*, such as floors are scrubbed with, and after pouring some of the brine along the back and shoulders, he scrubs the sheep well all over, until he raises a lather as with soap; nothing more is necessary. The skin will be left bright, and red, and clean. Every tick and sheep louse instantly disappears, and if the skin had any tendency to itch, it is entirely cured; perspiration is promoted, and the growth of the wool improved. In this way I think that the general strength of the sheep, to withstand the effects of any storm, will be better promoted than by smearing of any kind, which is never admissible. Whenever this simple and cheap plan is once adopted, its effects are so obvious that it will never be neglected by the good shepherd every season after, at shearing time.

Grazier.

BLACK LEG IN CALVES.

Mr. Tucker—The remarks on "the black leg in calves," in your last number, taken from a Scottish paper, remind me of my own sufferings, and those of my father, from that dreadful disease for many years, and never occurring but on the one farm, and when the calves were in the highest condition. The inhabitants of the island of Araumore, on the western coast of Ireland, are famed for raising the finest calves in the kingdom. In one of my visits there, to purchase their heifer calves for spaying, in talking over the several diseases that stock are subject to, I named the *black leg* in calves, and to my surprise I learned that they had for a century before, in that primitive spot, been aware of not only a cure, but a preventive for that disease, as effective as it was simple and easy to administer. At six weeks or two months old, they took the calf, and under the tail near the butt, where the skin is free from hair, a small incision is made, and pea of garlic about the size of half a hazle-nut is inserted into the incision, the skin being loosened a little *downwards*, so as to retain the pea, which is left in. The effect is surprising. As quick as the person performing the operation can step from the tail to the mouth of the calf, the smell of the garlic is perceptible on the breath of the animal! On my return home, I had the operation performed on all my calves, and every year afterwards when about two months old, and from that time to the present I never lost one from the "black leg." I will here add, that I never heard as yet of a case of the "black leg" in calves in this country; but if such a disease ever makes its appearance, you may rest satisfied that the above is a sovereign remedy. GRAZIER.

Louisville, Ky., 10th June, 1845.

WASTE MANURES.

The Economy of Waste Manures; a treatise on the nature and use of neglected fertilizers. By JOHN HANNAM, 8vo., pp. 114. London, 1844.

This is a valuable practical treatise on manures that are generally neglected, or suffered to go to waste. Although its application is intended for the farmers of England, it may nevertheless be read with advantage in this country. The essay was written for the Yorkshire Agricultural Society, by Mr. John Hannam, who is the author of two prize essays, "On the use of hand tillages," and "On the effects of special manures."

The work before us on "Waste Manures," may be had of Wiley & Putnam, in New-York. It has less of scientific detail, and more of practical utility, than most of the late chemico-agricultural publications, and is accordingly better adapted for perusal by the plain homespun farmer.

That the reader may judge for himself of its value, and of the subjects treated, we will state its contents. It is divided into three chapters. Chapter 1, Introductory—the importance of an inquiry into the economy of waste manures. Chapter 2, The general nature of waste manures, and the source from which they may be obtained. Chapter 3, The particular nature, value, and economy of waste manures.

The third chapter is divided into three parts—the first designating the waste manures of the farm; the second, waste manures of towns; the third, local waste. By enumerating these the American farmer will see at once what part is applicable to this country.

"1. Waste manures of the farm.

"Draining from cattle sheds, draining from manure heaps, drainings from houses and offices—gaseous waste from manure heaps—refuse, and vegetable."

"2. Waste manures of towns.

"Sewerage waste—waste of manufactures, viz: shaddy, croppings, sweepings, singeing dust—flax waste, soap liquid, gas waste, viz: coal tar, gas lime, ammoniacal liquid—sugar waste, soap boiler's refuse, tanner's bark."

"3. Local waste.

"Peat, sea-weed, ashes, fish, clay, marl, chalk, sand, water."

The neglected and waste manures of the farm, as above stated, are applicable to this country as well as to Great Britain. The drainings from cattle sheds, and barn yards are very common here. We often see a barn-yard on a slope, permitting all the liquid portions of the manure to run to waste, and the remainder to be soaked and leached by the rains so as to render it of little value. Nay, some old fashioned farmers among us are so averse to wet and moisture, that they dig trenches that their barn-yards may be perfectly dry.

Drainings from manure heaps are also to be avoided. Hannam recommends trenches to be dug around a compost or manure heap, and a pit at one end to receive the liquid, which is to be returned upon the heap. This may be rendered unnecessary with us by heaping the compost on one side of the barn-yard, which, if hollowed, will receive the liquid, or soakings from rain, and will not be lost. It has been my practice to remove the manure from the stable, hog pens, and barn-yards, spring and fall, and to make a compost with these and other materials, on the side of the yard, or in the field where they were to be applied. After fermentation, the heap was turned, the materials broken and well mixed before application. In two instances my heaps had begun to ferment, when the fermentation was arrested by repeated and soaking rains, one instance in the spring and one in the fall. The manure was consequently cold and heavy, and depreciated when carted out. To remedy this inconvenience, a shed was built adjoining the barn-yard capable of holding 150 to 200 ox-cart loads of manure. Under this shed it is now heaped and fermented, free from exposure to the weather, and two trials of its utility have been very satisfactory. Some farmers, particularly those among the *Friends*, in the western part of New-Jersey, protect their compost heaps by the same method.

The drainings from houses and offices are universally neglected, and in some cases might be easily preserved and conveyed to the compost heaps or barn-yards, to add to their fertilizing properties; but in this country it is difficult to recommend a course that would be universally applicable.

Gaseous waste from manure heaps should by all means be avoided, as a mass of compost in a state of fermentation, exposed and unprotected, loses a rich and valuable portion of its substance. The author of the work under consideration says, (p. 26)—

"The loss of *gaseous manure* arises from the escape of the carbonic acid, and the ammonia of the vegetable and animal matters in the manure heap, during the process of fermentation and putrefaction; both of which gases are essential in the nutrition of vegetables."

To prevent the loss of those gases which escape into the air, Mr. Hannum recommends what he calls a *fixer*. He informs us (p. 41) as follows:

"There are many kinds of fixers—oil of vitrol, green vitrol, blue vitrol, salt and lime, gypsum, &c., may be used; but some of them at all times, and in some cases all of them, have the fault of costing money. A substitute which costs nothing except labor, is therefore to be sought for. Such exists in cinder siftings, charcoal dust, good black earth, peat or bog mould, rotten saw dust, leaf mould, black mud from ponds, bottoms of wood stacks, soot, brick dust, burnt clay, &c. Some or all of these may be had in most places."

Under the head of *Waste manures of towns*, there is very little applicable to this country. The waste from sugar-houses has not been collected as far as I know for manure, but the spent ashes of soap boilers in the city of New-York, is a saleable article, and is sought for by farmers of the surrounding country. Tanner's bark is abundant in some parts of the country, and is generally neglected, because by itself it will not decompose or rot. But when mixed with animal and vegetable substances which will ferment, tanners' bark will undergo the same process and become soluble, and be converted into a fertilizer.

Under the head of *Local waste*, Mr. Hannam treats of peat, sea-weed, ashes, fish, clay, marl, chalk, sand, &c. None of these are entirely neglected in this country, though some of them might be used more extensively, or to more advantage. Peat has been sparingly used, but its application as a fertilizer in compost is becoming more general. The value of sea-weed, ashes, and fish, is well known on the sea-coast, and these articles are by no means neglected. Clay also is used to render sandy soils more retentive, and sand to make stiff clays more friable. We have marl, but no chalk to add to soils deficient in lime. The shell marl of the Southern States has been neglected, but the experiments of Mr. Ruffin have brought it into notice, and it is producing utility in restoring some of the worn out lands of Virginia. The marl of New-Jersey, found in the green-sand formation of that State, is extensively used there, and has been the means of greatly increasing the value of land. The white calcareous marl found in Ulster and Orange counties, of New-York, has not been brought into use, probably from the difficulty of raising it from the places of deposit in low and wet bogs; or because fertility in those grazing counties was so much easier and so much more cheaply produced by gypsum. A substance called marl has recently been employed in Rockland county, of this State, derived from the debris of the sand-stone rock at Nyac, (geologically the old red sand-stone.) What the ingredient is, which in this sandy marl causes fertility, has not been chemically ascertained. But in the green-sand or Jersey marl it arises from potash, which exists in it to the amount of ten and twelve per cent.

There is much in this treatise on waste manures, to make farmers think and act for themselves. Further details would burthen the reader, and trespass upon the pages of the *Cultivator*, but we cannot refrain from giving the concluding paragraph, in which Mr. Hannam recommends to his countrymen to husband their own resources, in which we cordially agree, and think the advice would be useful to American farmers.

"It has been shown that, by a proper economy of manures which are now wasted or neglected, we may *increase the production, and decrease the cost of food; that our farms, our towns, and particular localities*, are sources from which an abundance of these manures may be obtained; and that they have been made use of, in some cases, with eminent success, and may, by the use of proper means, be employed in other cases with equally beneficial results. It remains, therefore, for us to hope, that the suggestions which have now been offered on their economy, may not be altogether fruitless; but that the same energy of spirit which induces the agriculturist to explore the caves of India, and the battle-fields of Europe, the *coasts of Africa, and the islands of the Pacific*, for the elements of fertility, and which carries the manufacturer to the plains of Saxony and Australia for the materials of our garments, will lead us to cultivate *our own resources*, and make use of the vast stores which we possess, of the *raw material* of the bread of the people." (p. 113.) A PRACTICAL FARMER.

☞ The above work has been republished by Cary & Hart, booksellers, Philadelphia, and may be had at the bookstores. Price 25 cents.

NOTES OF A BOTANICAL TOUR—No. II.

MR. TUCKER—In my last, after ascending the Cumberland Mountains, Tennessee, which are at that point (on the road between Nashville and Knoxville,) thirty miles across, I made some remarks on their fitness for sheep. In continuation I will give you some extracts from my journal:

April 15.—Frost last night. Continued on the mountain, going up and down hills and along ridges, having occasionally a glorious view of distant mountains, until I arrived at the Crab Orchard, at the foot of Spencer's Hill, or rather mountain. This is one of the highest points of the Cumberland range, a mountain raised on a mountain. It was about 3, P. M.; a clear fine day—went on the highest peak where, seated on a rock, I had a fine view of mountain, plain, and river. The *Rhododendron*—laurel of the south—and *Kalmia latifolia*—ivy and calico bush of the south and laurel of the north, grew in the clefts of rocks at the summit, accompanied with several vacciniums, (huckleberries.) Here also, were the showy flowers of the Ladies' Slipper, *Cypripedium acaule*. Growing on the loose rocks at the foot of the hill, was the true *Phacelia bipinnatifida* of Michaux. Its bright blue flowers are quite pretty, but when handled the plant emits a rather disagreeable odor. On the western part of the Cumberland mountains, met *Robinia hispida* (honey locust) in flower, and afterwards saw it frequently on the Allegheny mountains, near the Warm Springs, and other places. I should have mentioned that beneath a ledge of rocks near the summit of the hill I found a new species, the *Streptopus maculatus* (nobis.)

16th.—Left my kind host about 10, A. M., and at the distance of five or six miles called to see a fine waterfall of about 90 feet perpendicular. After the water falls it descends along a deep gorge among the mountains. At the distance of 11 miles from the Crab Orchard, arrived at the eastern foot of the mountain, and soon drove into a fine farming section, and stopped at a house kept by an old revolutionary soldier, who was the first person I met in the state, who understood wherefore I was collecting plants. He informed me that about 20 years or more before a botanist, an elderly man, had spent several days at his house, from which he made several excursions to collect the plants of that neighborhood. It was probably Lyon, an English botanist, who made his headquarters at Ashville, North Carolina, who is said to have made an excursion of some weeks to the Cumberland mountains, shortly after which he died, as was supposed, from a cold taken in his excursion. He was buried at Ashville, and his collections and papers fell into the hands of those who valued them not and were lost. I met with but few before or afterwards, who had the least idea of the object of collecting specimens. The chief end and aim of most persons is to obtain property, and they are puzzled to contrive how money can be made from a dried plant, a shell, an insect, or a mineral. "What is the use of a dried plant or flower?" "It must be to make medicine!" How often I have been told—"You are getting these to take to the north and make medicine to send back and sell to us." "You must be well paid for being to so much trouble and taking so much pains." Another quite common opinion was, that I was collecting them "to print calico."

17th.—Passed through the village of Kingston to Mrs. Lucy's, 20 miles from Knoxville. Roads muddy from a heavy rain last night. People have just finished or are still engaged in planting corn. Shortly after my arrival, four young men, travellers on horseback, came in who, according to the usual southern custom, ride all day without stopping to dine or feed their horses. Horses will do well, and keep in good condition, under such treatment, as I can testify from experience. At Knoxville the landlord told me that I would find a German botanist at Dandridge on my route to the Warm Springs in North Carolina; and on the 19th, through mud, rain, and cold, over hills and rocks, I came to Dandridge, a little village among hills and rocks of limestone, on the French Broad river. Dr. Rugel, the botanist, was not at home nor did he arrive until next day towards night, when he came in loaded with plants. We were soon well acquainted and exchanged specimens. He was a real German student, careless of his appearance, very industrious, and the best prepared and equipped for collecting and preserving specimens of any person I ever met. Still his knowledge of American plants was very limited. I soon agreed to spend several days at Dandridge, and then we would make an excursion to the Smoky mountains, whose summits were in full view about forty miles distant. On the rocky lands of the French Broad, found *Philadelphus hirsutus*, (syringa,) *Viola tricolor*, *Arabis*, a species lately described by Mr. Sullivant; *Sisymbrium canescens*, *Chærophyllum taintureii*, *Hydrophyllum macrophyllum*, *Meconopsis dephylla*. I went about five miles from Dandridge down the river, and obtained an Indian plate of limestone (about the size of an ordinary dining plate) with scollop edges. It was found a short time before in a small mound beneath the head of an Indian skeleton about six feet long. The back of the skull rested on the plate with a very rich square piece of lead ore by its side. The field containing the mounds had just been planted with corn and was part of a rich alluvion at an elevation sufficient to prevent its being overflowed by the river. Yet time was, within a comparatively modern period, when it was all beneath the water, since the ground was strewn with as well as contained, beds of numerous shells mostly of one species, the *Io spinosa*, which is now found living in the French Broad, but is by no means as common in a living state as it must have been at a former period. Not far distant from the small mound containing the skeleton, is a large conical mound, hollowed out at the top, apparently for the purpose of containing warriors, from which they could fight with greater security, or as a place to which they might retreat. At the distance of a few rods, is a large excavation in the ground, from which the earth to form the mound was taken. I saw the remains of several sketetons, male and female, which had been plowed up, and the person who tilled the field told us that more or less of them were plowed up every year. They are contained in small mounds which were scattered in every direction over the field. Fragments of Indian pottery were also common. Extending across both the upper and lower end of the field, are the remains of ancient ditches. The afternoon that I visited this interesting spot, was warm and sultry, and the person who accompanied me (Dr. Hill) was in a state of ill health, so that we were unable to give the place a very thorough examination.

S. B. BUCKLEY.

West Dresden, Yates county, N. Y, 1845.

NOTES OF CONNECTICUT FARMING.

Mr. L. Durand, of Derby, Ct., informs us that he made, during the past winter, a short tour of observation through some of the towns of his section. From his notes, with which he has favored us, we give the following extract:

“In the westerly part of the town of Watertown, is the residence of Stephen Atwood. His farm lies on high ground, is somewhat rough; but is dry, and very healthy for sheep, of which he keeps a flock. His sheep are pure Merinos, and have been kept so from the commencement of his wool-growing. The consequence is, his sheep command a ready sale at large prices. He exhibited some of his flock at your State Fair, at Poughkeepsie, one of which, a buck, he sold to the Messrs. Morrell, and another to some Vermont men—obtaining for the latter, the price, (I think,) of $50.

“Mr. Atwood's wool is not as fine as some I have seen, but it is very compact on the sheep and of good length. I was struck with the perfect evenness of the wool on the sheep—it had the appearance of having been evenly shorn. On making inquiry of Mr. Atwood as to the quantity per head his sheep would shear, he said the flock would avarage six pounds of clean washed wool. He further said he had not used a buck for the last ten years, that would not shear annually, eight pounds. This shows what can be done in the way of wool-growing, if the right system is pursued. Mr. Atwood has one buck among a lot of others, which is the handsomest sheep I ever saw. His body is heavy and compact, legs short, neck short and well set on, so that every time he stepped, I noticed he drove the wool on the shoulder up against the horn.

“In the easterly part of this town, (Watertown,) I called on Jacob N. Blakeslee, another noted wool-grower. His flock consists, I believe, of about 350, and produces perhaps the finest wool in the state. His sheep are not so large as Mr. Atwood's, but yield finer wool, which commands a more ready sale in market. His farm is not as healthy for sheep as Mr. A.'s, but his sheep will grow, he says, till they are five years old, and will then shear five pounds of clean washed wool, very fine and clear from gum, and of course will not waste as much as other wool in manufacturing. Mr. Blakeslee sends his wool to Lowell every year, and gets such prices as enable him to persevere in raising fine wool; and indeed I believe that the only course which the eastern wool-grower can take for profit is to grow the finest wool possible, and at the same time increase the weight of the fleece. Mr. Blakeslee also exhibited some of his sheep at the Poughkeepsie Fair, and sold some to the Messes. Morrell and other wool-growers at good prices. He too, I think, has kept his sheep quite pure in the Merino blood. I hope the example of Mr. Atwood and Mr. Blakeslee will induce many other farmers in our state to persevere in raising good sheep and fine wool.

“The farmers here raise good cattle. At Mr. Atwood's, I saw a splendid red bull, one of the finest I ever saw—his blood Devon and native.

“In Watertown, particularly on Mr. Atwood's farm, I noticed a plan of building fences which answers well, and the farmers say it prevents sheep from getting out of the fields. It consists of a wall about three feet high, in the same shape of a worm fence, a heavy stone being placed on each corner, and on the top of this four heavy rails. It makes a heavy, stiff fence. But I noticed that in building this kind of fence, not more than half the stones were cleared from the fields. My plan, I think, would be to make heavy, whole walls; say four feet wide at the bottom, and four or five feet high. By making fences of this kind, the fields might be well cleared of the surplus stones and the ground left in a good state for cultivation.

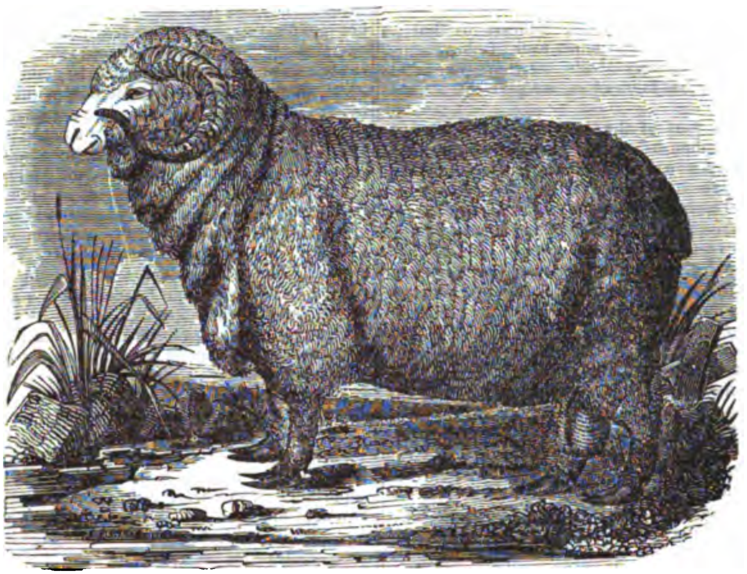
“I also visited the towns of Waterbury and Naugatuc. Waterbury is a large manufacturing town, and here almost every kind of article is made which yankee minds can conjecture. It is the largest manufacturing town in the valley of the Naugatuc, and the most thriving, with the exception of Birmingham, in Derby, which lies at the junction of the Naugatuc and Housatonic rivers, and at the head of water navigation. I do not know where farming can be made more profitable, than in the vicinity of these flourishing manufacturing villages. A home market is what the farmer wants, which is always better than one at a distance. In these villages he can always find a ready market for his produce, and generally good prices. Thus, pork in Waterbury, the past winter, has brought a better price, and had a more ready sale, than in New Haven, one of the capitals of the State; though a smaller amount would furnish the market every day. Naugatuc is also a flourishing manufacturing town; with some spirited farmers. The towns of Prospect and Cheshire, are devoted to farming. The former, is a small, hilly town, situate on high land, and the farmers to correspond, take several copies of the Monthly Visitor, and Cultivator. In Cheshire, some twenty copies of the Cultivator are taken, and the farmers have a good soil to cultivate, and are quite spirited. I am aware that the winter season is not as good a time for taking notes on farming, yet there is always something new to be learned, if people are willing to learn.”

BE DEFINITE.

Mr. Tucker—I have, from the impulse of the moment, decided to send you a *little lay* sermon, upon the importance of the brief words that compose my caption. You are indebted for this favor, to the vexation I have this minute experienced, while engaged in reading, for my gratification, on a favorite subject, viz: *good cookery*. I may as well say, here, that I am particularly fond of choice corn bread, or as the yankees call it *johnny cake*; and I desire also to have it “twice alike,” or in other words, always the same, and that same *very good;* but it has been my fortune to occupy quarters for many years, where the mistress of the house presides both at her pantry and her table, and she scouts the idea of being *definite*, or of doing things *exactly* by rule; hence her *johnnys* are *never* twice alike—the *good* are “very good,” the *bad* “too poor to give the pigs.” I was reading, as I have premised of gastronomy, in one of the daily newspapers, and an article headed “choice corn bread,” “directions for making, &c.,” met my eye,—“Ah ha! thought I, now will we have a touch of the delicious *all* the time, hot corn bread, every day quintescently light, and always the same. So I began to read—“Take as much corn meal as you wish to cook, scald it well, stir it thoroughly, mix it to the consistence of batter, with milk; the more you mix it the better; add an egg, one teaspoonful of saleratus, a tablespoonful or *more* of lard, mix thoroughly, and bake.” On a second reading, I looked as I am wont, to the *practical* part, prefacing it with “is this just the thing, let us see:” “Take as much corn meal as *you wish*”—ah, the jackanapes, I could pommel you with right good will,—“as much as *you wish*”—suppose I wish 1 quart, or up to 10, or any other number; all the same, eh? 1 teaspoonful of saleratus and 1 egg—all right for 1 qt. 2, 3 or 10!! I'm done up—the RALE THING has vanished. Why was'nt you *definite*, you ninny? “Then mix it with milk to the consistency of batter.” Are there no *degrees* in the “consistency of batter.” Would one qt. or 3 qts., make some *one* of these degrees? Why did you not say how *much* meal and how *much* milk, that some benefit might have come of your knowledge? Now, Mr. Editor, I have a vast many times had trouble with these “point no point” writers, and lost the good I love to enjoy, just because they do things by *halves;* they will tell you something as particular as a “teaspoonful of saleratus,” and others, perhaps of vital importance, are left for conjecture, and that too, in cases where they profess to be giving you a *receipt*, that is, special direction for preparing the compound.

How much, sir, every where, and even in your own excellent paper, is left undone, in this particular; how many mistakes would be avoided while attempting to pursue directions,—how much disappointment prevented,—how much positive good be wrought and success insured, if writers were *definite*, where now occurs a dispiriting failure, consequent upon pursuing, *half informed*, the various plans of benefit and improvement concocted by your correspondents and offered in your colums.

Oneida.



MERINO BUCK "VERMONT HERO," *owned by Mr.* A. L. BINGHAM, *of Cornwall, Vt.*—(Fig. 72.)

MR. A. L. BINGHAM'S SHEEP.

As we have remarked in another place, we had not an opportunity of seeing this animal; we are, however, assured that the cut is a good likeness. Mr. Bingham says "the portrait is no flattery." He was bred by Tyler Stickney, of Shoreham, Vt., and is brother to Mr. Jewett's *Fortune*. The sire was bred by Hon. William Jarvis, and the dam was from the flock of Andrew Cock, Esq., Flushing, Long-Island. She was owned by Mr. Stickney, and it is said was an extraordinary sheep, both for constitution and wool—"the weight of her fleece," (says Mr. Bingham,) "running from five to seven pounds." We are informed that she died in 1843, at the age of fourteen. Mr. Bingham states that the weight of this buck on the 11th of April last, was 150 pounds; that "the weight of his first fleece was 4 pounds 15 ounces, the second 8 pounds 12 ounces, the third 12 pounds 8 ounces, the fourth 13 pounds." The fleece of the present year was not shorn when this statement was written. He will be, as is stated, five years old on the 22d day of July, 1845.

Mr. Bingham informs us that he has lately purchased of Joseph I. Baily, of Rhode-Island, "forty-four sheep, all ewes but two," for which he paid $661, having his "entire selection from the whole flock, consisting of 250 full blood Spanish Merinos." This stock, he says, "were imported by James D'Wolf and Paul Cuff, in 1812 or '13. They were bought," continues Mr. Bingham, "by his [Mr. Baily's] father, at the wharf, and he tells me they have been bred pure ever since—always breeding from bucks of his own raising. His flock is the most uniform of any I ever saw; remarkable for size, low on the leg, heavy boned, wide chested, large and thick necked, considerably ruffled, heavy fleeced and dark colored on the outside, the wool fine, thick, and long in the staple." The weight of the fleeces of Mr. Baily's breeding ewes, over a hundred in number, Mr. Bingham says, "averaged five and three-quarter pounds per head. His lambs from these ewes," says Mr. B., "averaged six pounds five ounces per head, all well washed wool."

Mr. Bingham thinks the weight of wool was much increased by Mr. Baily's somewhat peculiar mode of management. "He selects his sheep in the first place into small flocks, of equal size and strength, taking special care to keep them fat the year round. He told me that he never allowed any snow or rain to fall on them from the middle of November till they are turned out to grass in the spring. I believe a sheep will shear from a quarter to half a pound more wool by being kept sheltered from the storms, than they will by being exposed to all kinds of weather. Many persons will keep them out at a stack all winter, with nothing to shelter them from the storm; and they not only sustain a great loss of wool and flesh, but not unfrequently a great loss of life. Mr. Baily tells me he feeds grain to his sheep but two months in the year—a month when they are first put to hay, and the last month before they go to grass. His lambs are dropped between the 15th of April and the first of June. To avoid the danger of the sheep running over the lambs when housed, they are kept in very small lots."

DURABLE FENCE—BARNS.

Mr. L. Tucker—Every farmer should have his lands well fenced. All will admit this, and yet how few have fences that can be trusted. In this climate, where frosts prevail, fences will need repairs every spring if built in the ordinary way; and it is one of the greatest vexations that farmers have to encounter, the inefficiency of their frost-shaken fences. The experience I possess in relation to the erection of permanent farm fences, has been considerable. A stone wall, which, for some farms, is the cheapest and most durable fence, should be constructed by first digging a trench eighteen inches deep by two feet in width. This should be paved with oak or yellow pine boards; and upon this commence laying the foundation, not with small stones that will work out, but with large flat stones that will lay well. It is likewise necessary to lay the stones lengthwise across the wall, which will bind and strengthen it. A wall put up in this manner will stand the heaving influences of frost much longer, and maintain its even and straight appearance, in which consists the beauty and efficiency of a wall, to amply repay the extra expense. Every wall should be made five feet high, which is a reasonable security for an enclosure against the depredations of most animals. It is my opinion that the cheapest fence for farms where stones cannot be had, and lumber is scarce and high, would be a fence constructed of cast-iron pickets, the pattern for the construction of which should not exceed one-eighth of an inch for the most part, increasing to one-quarter where the holes are placed for securing them to the iron bars. The bars should be twelve feet in length, cast very light, with holes in them at proper distances for riveting. The riveting process is simple, and soon done. any blacksmith being able to rivet from ten to twelve pannels a day. To make the pickets as light as possible it is necessary to groove the pattern through in the middle three-fourths of an inch, leaving three inches at the top and bottom solid, excepting the holes where they are secured to the bars. Three feet is length enough for a picket. The expense of construction would be lessened by the use of wooden posts instead of iron; the latter, however, would be preferable. A farm provided with a fence of this material, if kept thoroughly painted, would be fenced, not for a day, but for all time.

I have found the most durable way to set posts and prevent them from being thrown out by frost, is to dig the holes large enough to admit of their being filled up with small stones and lime mortar; the lime prevents decay, and the stones prevent in a great measure the action of frost. It is of the utmost importance for farmers who wish contentment of mind, good neighbors, the enjoyment of their own property, and to be free from vexatious litigation, to put up good and sufficient fences both inside and out.

A few Hints on Barns intended for Hay.—The The site for these buildings is of the first importance. It should be in the vicinity of the hay field, for in the hot and sultry season it is a saving of time and labor to have them thus located. It should be, if possible. dug into the side of a hill, which will enable you to draw the load near the roof, which elevation will likewise enable you to pitch the hay down. All will admit it is easier. If you have no side hill on which to build, the posts of the barn should be at least fourteen feet high, which will secure ample bay-room, which is very much needed in all hay barns. The opening for putting in the hay should be at the east, as it will be shaded in the afternoon, the time in which most hay is put in. To construct barns for this purpose in the most economical way, I would recommend placing the posts upon the sills at the distance of twelve feet asunder, gird parallel with the sills half way up the posts, then board up by placing the boards lengthwise from plate to sill. For a roof, match the boards close and lay two thicknesses, taking care to break joints. Every barn should be provided with a conducter or lightening rod. An easy method is to put them up in the form of a half circle, stretching along the roof, supported by non-conductors. The fluid coming in contact with either end of the conductor will travel to the opposite end, where it will explode into the air. Yours respectfully,

H. Cooke.

Tivoli, Dutchess county, N. Y., 1845.

SPECIMENS OF SOILS FROM WISCONSIN.

The samples of soil alluded to in the following letter, were handed to Prof. Emmons, by whom they were subjected to an analysis, the results of which, with accompanying remarks, will be seen in the subjoined article. The Professor's remark that "it would be easier to make suggestions on the spot than at a distance," is obviously correct, and should always be borne in mind in soliciting information on such subjects.

Geneva, Wis. Ter., May 27, 1845.

Mr. Tucker—I take the liberty to send you a sample of marl found in this vicinity, and also a small quantity of the soil taken from my farm, both of which I wish to have analysed.

My object is to ascertain in the first place the nature of my soil, that I may be able to apply such manures, if they are within my reach, as will be most likely to facilitate the growth of wheat; and I wish also to know whether this marl will probably be valuable as a manure on such soils as mine; and will charcoal be likely to increase the wheat crop here; and you will confer a great favor by suggesting any thing that would be of service in the cultivation of our great staple.

Such lands as mine in their present state, will yield about twenty-five bushels to the acre, with good cultivation, without manure; but I suppose the average is not over fifteen bushels, under our present poor management. I wish to see what can be done on our new lands in increasing our yield of wheat, and intend to make my experiments with care, and keep an exact account of expense, that I may determine how well we may cultivate our new lands and make it pay.

You will oblige me much by assisting me to obtain such information as will enable me to start right in this matter. C. M. Goodsell.

To C. M. Goodsell—I hereby acknowledge the receipt of two specimens, one of soil, and the other what was supposed to be marl. I have analyzed both, and below I give you the results. The soil is extremely fine, and very different in this respect from any of the soils of New-York or of New-England; as the latter are always coarse, or at least when compared with that from your farm. It is of the color and appearance of ground emery; it will all pass through the finest sieve. When examined under the microscope, a few white grains of quartz may be seen, the largest of which are about the size of mustard seed. If this is a sample which represents the soil of your farm, its fineness is its most characteristic property. It will lie too compactly after it has been cultivated for a few years longer, or when its vegetable matter is expended, and will require more strength of team to plow it than coarse soils. It is evidently silicious, and seems to be a fine sediment which was deposited far from land and in a deep sea.

Analysis—100 grains gave the following result:

Water, ...	5·00
Vegetable matter, ...	9·50
Silex, ...	80·21
Carbonate of lime, ...	1·00
Phosphate of alumine and lime, ..	0·50
Protoxide of iron and alumine, ...	3·62
	99·83

The so called marl is really *tufa*, and is composed of 97 per cent. of carbonate of lime. Some parts of it are entirely soluble in warm muriatic acid; in others, there is a sediment of silicious matter. It is to all intents and purposes a pure carbonate of lime, and may be used for quick lime for mortar, water or agricultural purposes.

The questions which are put in your letter are not easy to answer, inasmuch as the composition of the soil is not defective. The way to improve it, as it appears to me, is to add coarser materials to it, that is, improve it mechanically—as fragments of old brick, pottery, plaster, broken stone, etc.; also coarse charcoal, bones—a good plan would be to add the broken tufa without burning. I feel that it would be easier to make suggestions on the spot than at a distance, for after all local circumstance must greatly modify the treatment in any given case.

E. Emmons.

GRADE CATTLE.

Mr. Tucker—I noticed in the May No. of your paper, a communication relative to cross breeds of cattle. Presuming that my experience in that important branch would be interesting to some of your readers, I have taken the liberty to address you on that subject.

In the year 1840, I possessed a cow of the old fashion breed; (I am unacquainted with the technical name,) and desiring to improve it, I drove her to a neighbor who possessed a full blood short-horned Durham bull. In the spring of 1841, she had a fine female calf. This calf grew up, and at three years old had a calf of about three-quarters Durham. Last fall, or early in the winter, this half bred had another calf. About four weeks after, we commenced milking her: the first week she made 8 lbs. of butter; the second 7; the third 9; the fourth 8—making in all 32 lbs. in four weeks. She was fed on common hay, and about three pints of wheat bran a day. She had no particular care taken of her, as to currying, &c. She is a kind gentle beast, not very particular as to what she eats; and every way calculated to leave the impression as being a good and profitable breed to the farmer. A Subscriber.

Coyemans, May 13, 1845.

Farmers' Motto.—Contrive to collect cash—and keep it.

THE CULTIVATOR.

ALBANY, JULY. 1845

TO CORRESPONDENTS.

COMMUNICATIONS have been received, during the past month, from John Clark, Alex. M'Donald, A Farmer's Wife, S. Tillotson, D. G. Mitchell, C. N. Bement, E. Comstock, Thomas Close, Isaac Dillon, S. B. Buckley, Woodside, Grazier, C. Butler, A. F. W., O. P., J. P. Norton, J. Girdwood, Barclay White, J. R. A., J. P.

We are under obligations to GREELY & M'ELRATH, publishers, New-York, for Part III. of Dr. Lardner's Lectures on Science and Art—To Messrs. VALK & Co. Flushing, for Catalogues of Roses, Pelargoniums, &c. cultivated at their Exotic Nursery and Horticultural Gardens; (see advertisement)—To LEA & BLANCHARD, publishers, Philadelphia, for vols. 3 and 4 of the "Exploring Expedition"—To LEWIS GOMPERTZ, Esq. London, for nine numbers of the "Animal's Friend," and a vol. entitled "Moral Enquiries"—To L. DURAND, for Premium List of New-Haven Co. Ag. and Hort. Societies.

☞ The continuation of Mr. ROBINSON'S Notes of his Tour, were forgotten till too late for this month.

☞ We have received a letter *unpaid* from Jonathan Morgan, Portland, Me., accompanied by diagrams, designed to show that Lawrence's Improved Buckle, spoken of in our May number, is "no new thing, but has been in use for a great length of years." He is informed that there is no similarity between *his* buckle and Mr. Lawrence's.

EGYPTIAN BARLEY.—A correspondent at Laurens, S. C. (Dr. W. R. we believe,) wishes to know where this variety of barley can be obtained. Who will furnish the information ? We shall be glad to hear from our correspondent, on the subject he mentions, or on any other of interest to our readers.

QUACKERY.—JOHN CLARK, of "Flat Rock, Shelby county, Indiana, Noble township," sends us *unpaid*, a long and almost unreadable letter; the purport of which, so far as we can make it out, is to inform the public that he thinks he has found a cure for milk-sickness, and is *willing* to "sell a knowledge of it to all that wish to purchase, who appear in *person*." In a postcript he informs those who wish to have any communication with him, to be sure and *pay their postage*.

☞ "A FARMER'S SON," (Watertown, N. Y.,) will accept our thanks for his good wishes. We should be glad to receive any agricultural facts from the county of Jefferson, which we know can boast of some as good farmers as any other section. The "first attempt" of our young friend, certainly needs no apology. His opinion in regard to the usefulness of well-conducted agricultural papers is undoubtedly correct.

TRANSMUTATION.—We have not room for the well-written communication of our respected correspondent, C. W. of Maryland. He has not probably read the able discussions which took place on this subject, some years ago in the Virginia Farmers' Register, American Farmer, Genesee Farmer, and The Cultivator, or he would not suppose that the disbelievers in the transmutation of wheat into chess, "mostly rely upon ridicule," to support their side of the question. On the contrary, they rely on the unchangeable laws which govern the growth of plants, from which there never has been, to our knowledge, a well-authenticated instance of departure, and that there never will be such an instance, we have the assurance of Him who provides "the seed-time and harvest," for He informs us that "what a man soweth, that shall he also reap." Our correspondent thinks "with Prof. Lindley, that further observations are required to settle this question;" and "that if one kind of grain could be made to produce another by experiments so performed as to be free from fallacy, the question would be at once settled." No doubt of it. "But we may not be able to succeed in this experimentally without a vast deal of time, labor and expense." If our correspondent is disposed to experiment in this matter, we will agree to pay all expenses incurred, and pay him a premium of $50, if he succeeds in showing that chess can be produced from pure wheat—with this single proviso, that he shall report his experiments for the benefit of the public, in case of his failure to demonstrate the doctrine of transmutation.

RIBBON HOUSES.—In our Feburary number we spoke of this kind of houses. We have received a letter from Mr. THOMAS J. LEWIS, in which we are informed that the plan is coming into use in Massachusetts, with considerable approbation. That "two men can build a two story-and-a-half house, twenty by thirty-five feet, in five days; and by men too, who have but little knowledge of the carpentering business,—making a house much handsomer, stronger, warmer, and above all, at one-half the usual expense."

MONTHLY NOTICES.

IMPORTED BLOOD HORSE.—Mr. C. T. ALBOT, of Westernville, Oneida county, N. Y., who has lately returned from a visit to England, brought with him a fine English blood horse, called *Consternation*. This horse was bred by Matthew Hornsy, Stiltenham, Yorkshire, England, and is said to be of the best racing blood. In 1844, being then four years old, he won a purse of 100 sovereigns over the York course, beating the noted horse Phœnician. From an accident to one of his legs, he has not since been run. Consternation is a large horse, for one of his age and breed, with good bone, clean limbs, and muscular quarters. When we saw him he was in low condition from the effect of the voyage, so that his appearance was of course less favorable than it will be after he shall have had an opportunity to recruit. From the pedigree of this horse, it appears that he inherits the blood of some of the most celebrated stock ever produced in England—such as Hap-Hazard, Highflyer, King-Herod and Flying-Childers. We are no advocate for *racing* horses, but we believe an occasional dash of the pure blood of the race-horse is of advantage to our stock for the carriage and road. Practice, we think, has fully proved this, both in England and this country. We invite the attention of connoisseurs to Mr. Albot's horse.

NOVEL RAT-TRAP.—We saw it stated in a newspaper several years ago, that a rat had been caught by an *oyster*. We hardly gave credit to the story then, but have lately seen proof that similar things are sometimes done. A man brought us a rat caught by a *clam*. We were shown the rat, *trap and all*, so that there is no doubt about it. We were told it was the second rat which had been so caught in the course of a few days. The *operation* of the trap is this—the clams lay in a cellar—occasionally one would die, and when the shell opened, afforded the rats, we suppose, a delicious morsel. The *live* clams would also sometimes open their shells, and into these, as they were searching over the heap, the unwary rats dropped a foot, which was at once grasped and held firmly in this animal vice.

MISTAKE CORRECTED.—A mistake occurs in the last or fourth volume of the Transactions of the New-York State Agricultural Society, which may lead to a serious error if not corrected. In speaking of the use of *whale oil soap* on page 310, for "*half a pint* of soap added to *half a pint* of water," read, *half a pint of soap to half a* PAIL of water. Unless the degree of dilution approaches the latter, vegetation may be destroyed by the acridity of the soap.

AGRICULTURAL ADDRESS OF COL. A. MCDONALD, BEFORE THE AGRICULTURAL SOCIETY OF BARBOUR COUNTY, ALABAMA.—In the *Southern Shield* we find a copy of this production, which is highly creditable to the author, and, we should think, well calculated to stir up the people of that section to the improvement of agriculture. Besides many other matters, Col. McDonald compares the present state of agriculture at the south with what it was forty years ago, by which it is seen that within that time many improvements have taken place at the south, though, as is remarked, there is probably room for greater advancement. The great improvement in the construction of the plow is spoken of, and a pretty confident hope expressed that the day will come when that implement "will be seen to pass and repass through our fields propelled by steam."

Large Egg.—Mr. Jesse Buel has left at this office a hen's egg which measures six inches in circumference one way and seven and a half inches the other way. Has any body's hen laid a bigger one?

Gapes in Chickens.—J. H. D. Lownes writes in the *Southern Planter* as follows:—"My residence was proverbial for gapes, but by mixing the dough with chamberlye and baking the bread, it is banished. A tea-spoon full of urine given to a chick in the first stage of the gapes, will cure it; but begin with it, and they will never have it, with good care."

Advertisements.—The reader is referred to our advertising department for an interesting statement from Mr. Bommer in relation to his patent method of making manure.—If any of our farmers are disposed to remove to Virginia, they will find a favorable opportunity for the purchase of farms, by noticing the advertisement of Mr. Gouverneur, who, it will be seen, offers for sale a portion of the estate of the late President Monroe.

Potatoe Rot.—Some person has sent us a number of the *Honesdale* (Pa.) *Democrat*, containing an article on this subject signed "Chemico." In regard to the potatoe rot, he says—"Be kind enough to inform them [the farmers] that it is caused by a want of the alkalies." * * * "Please tell them if they would save their potatoes, and raise larger crops, they must supply lime," &c. He closes by advising farmers who read his article, to—"inform their neighbors of it, and let us hear no more of injury sustained from rot in the potatoe"! Many of our readers will doubtless recollect that we have recorded several instances where lime had been used, in various ways, without any effect to preserve the potatoe.

Centre Draft Plow.—We see it stated in the papers that Mr. John Mears, jr., attached to the house of David Prouty & Co., Boston, sent one of the best patterns of Prouty & Mears' "Boston Centre Draft Plow" to the Emperor Nicholas, of Russia. About a year has elapsed, and a day or two since Mr. M. was gratified by the reception of a note from his Excellency, M. Bodisco, the Russian Ambassador at Washington, informing him that his plow has been received, and its usefulness acknowledged, and that his imperial majesty, apprrciating his intentions, had ordered him to present to him "the great gold medal," bearing the effigy of his Majesty, and the inscription "*Prœmia digno.*" The medal is a magnificent one, of the purest gold, weighing almost a pound.

Fine Sheep.—We find in the Ithaca Journal, a notice of the fleeces of Mr. J. R. Speed's sheep. His flock is said to be about 60—half of which are full-blood, and the remainder grade Merino. His stock buck is said to have sheared 10 lbs. 4 oz., of one year's growth, and several of the full-blood ewes sheared over 5 lbs. per fleece, well washed.

ANSWERS TO INQUIRIES.

Sweet Brier. D. F. B. (Peru, N. Y.)—It is said, we know not with how much truth, that it takes two years for the seeds of this plant to vegetate. Are you not rather too sanguine in the opinion that the sweet brier is capable of being made into a hedge "that will equal the thorn, and in many respects supercede it?" It may be worth an experiment, but from our observation it is not sufficiently durable and strong, does not grow thick enough, becoming too open by the dying of the old stems.

Grapes injured by Rose-bugs.—"*A Yeoman of Massachusetts.*" Syringing vines with soap-suds, in such a manner as to shower the bugs with some force, we should suppose would cause them to disperse. It is an insect that does not prevail extensively over the country, and we find no other accounts of its having attacked the grape vine.

Cast-iron Rollers.—In answer to the inquiry about cast-iron rollers, in our last, the New England Farmer says, "They can be obtained at J. Breck & Co's Agricultural Warehouse and Seed Store, 52 North Market street, Boston, where they have been for sale for years. Price from $20 to $25. Also, stone rollers, at from $12 to $18.

THE WEATHER AND THE CROPS.

From various points of the western part of the country, we hear very unfavorable accounts of the appearance of the crops. The months of March, April, and May were remarkably dry, accompanied by high winds, and several unusually cold turns. From Ohio, we have information from Cincinnati, Dayton, Columbus, Chilicothe, Zanesville, and Coshocton. The fruit was nearly all killed by frost in the vicinity of these places. The wheat was much injured by the high winds and drouth; and in many instances suffered much from frost.

Mr. George Wolfe, of Coshocton county, writes us under date of June 2d, as follows:—"We have had three or four frosts lately, which have materially injured our wheat and corn crops. In fact, the frosts and the previous drouth, have almost destroyed the wheat. I do not think it will average one-third of an avarage crop. Many farmers are pasturing their wheat fields."

The frosts which occurred here the last of May and the beginning of June, seem to have been much more severe in some other sections .We hear of much damage having been done at this time in Ohio, Michigan, and Illinois. The Ohio Cultivator, published at Columbus, under date of June 1, speaks of a frost on the night of the 29th of May, which "cut off nearly all the corn, and with it, almost destroyed the hopes of the farmers." It is added—"The prospects of the farmers in this region are gloomy indeed. We have spent the last week in traveling around, and can truly say we never saw crops generally so unpromising."

We have heard no particular complaints in regard to wheat from this state, or Pennsylvania. Grass in this vicinity is good; but south and west we hear that "old meadows" are light.

Prospects for crops in Alabama.—A. McDonald, Esq., of Eufalla, writes under date of May 19, that crops in that section suffered much from drouth, and in some degree also from cold, during April and the first part of May. A rain, however, occurred on the 11th of May, which was of much benefit. A larger proportion of the *provision crops* has been this year planted in that section than formerly.

FARM OF THE HON. J. C. CALHOUN.

In the *South Carolinian* we find an account of the farm of Mr. Calhoun, by a committee of the Ag. Soc. of Pendleton, S. C. It is spoken of as being naturally very superior, yet it is added, "to its proprietor clearly belongs the merit of very superior management." The details of the farming operations are not given by the committee, as they were so unfortunate as to make their call during the absence of Mr. Calhoun. It is stated that the two great evils with which the farmers of that section have to contend, are the washing of lands by rains, and its exhaustion by continued cropping. Mr. Calhoun it is said has found an effectual protection against the former in the use of "guard drains," and against the latter in the pea crop. The committee say—"The stock on this farm, consisting of horses, hogs and cattle, were of good breeds and in fine condition. The farm houses were sufficiently numerous, and both comfortable and convenient. And this more especially the case with the negro house, which consisted of a building of stone of superior masonry, two hundred and ten feet in length, divided into apartments, with separate fireplaces, sufficiently large for all the purposes of comfort and healthful ventilation.

"The committee, in conclusion, have no hesitation in pronouncing the management upon this farm highly superior. The useful and ornamental have been most happily blended, not only throughout the principal tillage crops of the farm, but also the more refined horticultural operations of the homestead."

WILD GOOSE—*Anas canadensis*.—(Fig. 73.)

Naturalists have not entirely agreed in regard to the generic affinities of this bird. Buffon, and most others, call it a goose, but Cuviér calls it a swan. The characteristic differences between geese and swans, are in some cases, however, not easily discovered. The bird is strictly American, not being found, so far as we are informed, on the old continent. From its peculiar habits, it is the most interesting of all the goose tribe. It is seen periodically all over North-America, from the equator to the highest habitable point towards the poles. Wilson says—"It is highly probable that they extend their migrations under the very pole itself, amid the silent desolation of unknown countries, shut out from the eye of man by everlasting barriers of ice!" Twice a year, they traverse this vast extent, amounting to one-fourth of the circumfrence of the globe! Their northern flight is the welcome harbinger of approaching spring; while their return from the boreal regions, on their southward journey, is the sure precursor of winter's reign.

Cuvier describes the plumage of this bird as—"Dark-ash; head, neck, and tail, black-streaked, and throat white; bill and feet black; tail of eighteen feathers."

Within a few years, it has been stated that *white* wild geese have been discovered in this country. Whether these are the *Snow geese*, spoken of by some naturalists, or whether they are a species of swan, we are unable to decide. In their size and note, however, they are said to correspond with the ordinary wild goose.

The wild goose breeds only at the north. Some of their favorite haunts are the shores of Labrador and Hudson's Bay. We have been informed by fishermen and others who have visited those regions, that they are found on the banks of creeks and streams, during the breeding season, in immense numbers. The fishing vessels sometimes send boats and procure their eggs in large quantities.

In becoming domesticated, the wild goose retains for a long time many of its original habits, and is much disposed to return to its natural state. An instance was related to us of a wild gander having been wing-broken by a shot, and caught. His wound healed, but he was so much disabled that he could never fly. He was kept with the domestic geese of the farm, with one of which he finally mated. He remained on the farm many years, and became very tame; yet as the migratory season returned, he always manifested the greatest uneasiness. Inpelled by an instinctive desire to fly away, he would wander about, often stretching his wings and pluming his feathers; refusing food, and even leaving unnoticed his domestic mate, to which he generally seemed much attached. If a flock of his former associates chanced to fly over, salutes were quickly interchanged; but the thrilling note of the free ones in the air, in the language of our informant, "seemed to set the poor captive *crazy* for a time, and for a day or two after he would be mute and melancholy." Except during the "flying season," he was very contented.

Wild geese are incapable of propagation till three years old, though the female is said sometimes to lay eggs which will not hatch, at two years old. She seldom lays more than five eggs at a brood or in a season; but these are almost invariably hatched and the goslings all raised. Considerable advantage is thought to result from crossing the wild with domestic geese; but the progeny so produced are hybrids, and, we believe may be said, *never* to breed. This clearly establishes the distinction of species. The mongrels are hardy, grow quickly, get readily fat, and are highly esteemed for the table; at the same time producing a greater quantity and better quality of feathers than common geese. For these properties, they are held in much favor by poultrymen who raise geese for market. We have seen crosses of the wild with the common grey goose, the Chinese, the Bremen, and the large African or Guinea goose. Some of the latter, raised in Rhode-Island, were as fine geese for market at six months old, as we ever saw.

We are indebted to Mr. Bement, for use of the engraving given above, from his Poulterer's Companion.

LEVEL CULTIVATION FOR CORN.

For any ground that is sufficiently dry and warm to be suitable for Indian corn, we are confident a level cultivation is best. We do not like the common plow for working corn—it not only throws the ground too much into ridges, thereby exposing too much surface to be dried by the sun, but from its pressure on the ground it leaves that portion below the furrows, harder than it was before. On very light land, mere surface cultivation will answer for corn; but where the soil tends to pack too heavy, as it will if there is too much clay in it, we must use some tool that will loosen and pulverize it, or the roots of the corn will be cramped and the tops stunted. A narrow shovel plow, or a tool like a coulter, two or three teeth, according to the strength of the team to use it and the state of the soil, to be set in a proper frame, are best for compact soils. A light harrow and cultivator will be found sufficient on light soils.

We noticed in the *Sommerville Reporter*, Tennessee, an essay on the cultivation of corn, read before the Agricultural Society of Fayette county, by John Wary. Mr. Wray commenced the mode of level cultivation twenty-five years since, and and continues it to the present time.' He has found it to answer well. He does not use the plow at all—he simply works his ground over with what he calls a *rake*, which seemed only to mellow and clean the surface. He works the ground so often with this, that the weeds have no chance to get sarted, so that he keeps the crop clean. He does not particularly describe the rake, or tell how it is made. He stated that he has tried this mode of cultivation in comparison with the old mode of using the plow, and that the rake gave invariably the best crop. He does not state particularly; we take it his land is of rather a light character. He plows his land in October and November, six to eight inches in depth, being careful to bury all the vegetation; and plants his corn from the tenth to the 25th of March, laying off the rows four and a half feet each way, and leaves three stalks to the hill. He says—"The reason why some farmers fail in the use of the rake is, that instead of *plowing* their land in the first place, they only *scratch* it, and then, instead of killing the grass in the germ, they wait until their fields get foul and then abuse the rake because it will not perform work it was never intended to do."

Windgall.—Windgalls are several little swellings just above the fetlock joints of all the four legs; they seem, when felt, to be full or wind or jelly; but they never lame a horse; the splint and spavin always do. They all three proceed from one and the same cause, which is hard riding, travelling too far in one day, or carrying too great a weight when young.—*Ayrshire Agriculturist.*

FARMING IN VERMONT.

In the month of May last, we had the pleasure of making an excursion to the "Green Mountain State."

To one who, like the writer, has been for several years accustomed mostly to the comparatively level surface of a portion of the "great valley" of the west, the physical features of Vermont are striking and impressive. The different geological character of the two sections, forms a wide-contrast in their surface and aspect—the primitive region we have lately visited, being, to the traveller capable of appreciating the attractions of nature, much the most interesting. There is, it is true, beauty of surface to be met with in the west—the "rolling" prairie, the shady "openings," and in other sections the dark primeval forests, are certainly beautiful; but the scenery seldom, if ever, rises to the grand and sublime. In the west, the elevated portions of the surface have but little variety; what are called hills appearing to have been formed by gulleys having been washed by rains from a surface originally uniform, leaving the tops of the hills on a general level. Here, the upheavings of the earth have given to its surface an almost endless variation, with elevations of different altitude, from the green hill, whose grassy sides, even in the most sultry heats of summer, are freshened by the ever-gushing fountain, to the hoary mountain, whose lofty summit arrests the career of the storm-cloud!

The natural circumstances of Vermont, mark it particularly as a *grazing* region. Its mountainous surface is unfavorable to the extensive use of the plow and the large cultivation of grain crops; while the richness and permanency of its pastures, the abundance of pure water, and the healthfulness of the atmosphere, show its admirable adaptedness to the rearing of horses, cattle, and sheep. The advantages of water which a hilly or mountainous country affords, are too often overlooked, or not duly valued. We have passed through sections where the farmers, during a drouth of not unusual continuance were obliged to drive their stock miles for water, and even then were forced to raise the water by a slow and laborious process from a deep well. If the Vermont farmers should be placed for a while in such a situation, they would be able to form some idea of the worth of their numerous springs and mountain rivulets.

The time allotted to our excursion was so short as to preclude the possibility of particularly examining a very large portion of the State. Our observations were confined chiefly to the counties of Addison and Chittenden, which are situated on the west side of the principal Green mountain range, bordering on Lake Champlain, and comprising, perhaps, the most fertile portion of Vermont. Under their appropriate heads, we propose to speak briefly of the different subjects to which our attention was attracted.

Soil.—A considerable portion of the soil of this district may be said to be a calcareous clay, often strongly tenacious, based on what geologists term transition or silurian limestone. This is more particularly the character of the valleys and lower parts of the district. The soil of the hills and higher parts, lying above the limestone, has in its composition a larger proportion of sand, and of course partakes also of the nature of the slaty rocks of which the hills are formed. In most cases gypsum operates well on these soils. We learned a remarkable instance of its effects from Mr. Rodman Chapman, of Vergennes. He had some casks of plaster which had been wet in a freshet, hauled out on some barren clay knolls, and spread over the ground. The effect was to clothe the ground with the most luxuriant growth of white clover, blue-grass, and yellow trefoil—a plant or two of the latter having come up accidentally, from which it was spread over nearly the whole field. The sward on the lot, (which we examined,) is still fine, and the product of herbage great.

Cultivation.—As before remarked, the plow is not extensively used in this section of country—the object of farmers being generally to raise only about the quantity of grain and vegetables required for home consumption. It is, however, stated by those best qualified to know, that Addison county produced last year a considerable surplus of bread-stuffs, beyond supplying the inhabitants. Wheat has been less cultivated since 1830, than formerly, owing to the attack of the wheat midge, (*Cecidomyia tritici*.) For the last two or three years, this insect has been diminishing, and a knowledge of this fact encouraged the farmers to sow this grain more extensively last season than they had done for several years before. Spring wheat is the kind generally sown—winter wheat being less certain to yield well. But since it has been ascertained that the injurious insect before mentioned is diminishing, some farmers have concluded to try winter wheat, and we were shown several small lots which were very promising. The Black-sea spring wheat is considered most hardy, and on this account has commonly the preference. Yield, twenty to forty bushels per acre.

Indian Corn is cultivated with success on some of the lighter and warmer soils. On the best lands, and with good cultivation, it frequently yields sixty, and sometimes eighty bushels per acre. We were shown many samples of this grain which were as bright and heavy as we ever saw. Mr. S. W. Jewett has a variety, which, for a northern latitude, we think highly superior. It is a twelve-rowed corn, but has been greatly improved by selection. The cob is small, and completely covered with corn, packed in the closest possible manner. Oats are a sure crop, and produce from forty to seventy-five bushels to the acre.

Potatoes flourish remarkably well, and are of superior quality. The yield is two hundred to five hundred bushels per acre. They are in some instances raised for the purpose of fattening stock, and for feeding sheep and store cattle through the winter. Those who have tried potatoes for this purpose speak very highly of them. Other vegetables are in some instances cultivated for feeding stock. Mr. W. Chapman, of Middlebury, is much in favor of the sugar-beet. He has tried it for store stock, and to some extent for fattening cattle. In February, 1842, he killed a heifer, fatted wholly on beets and hay, two years and nine months old, which weighed, dressed, 838 pounds, and had 135 pounds loose tallow. Mr. C. contends that beef fatted on this root is much more sweet, tender and juicy, than when fatted with meal.

We observed that it is a very uniform practice in this district to manure the ground intended for corn and potatoes very heavily. Where, from the nature of the soil or the dearness of labor, (as is the case here,) it is inexpedient to cultivate much land, we believe this to be the true course. It takes but little more labor to cultivate an acre which is made so rich that it will yield sixty or seventy bushels of corn, or four hundred bushels of potatoes, than to cultivate one that will produce only half as much. We noticed that the manure from stables and sheep-pens was spread very thick over the ground and plowed in with a deep furrow. If it were not for the fact that the quantity of manure used is so great that it is difficult to bury it or mix it properly with the soil, we should say it was plowed in too deep. We are in favor of deep tillage for general purposes; but there are two ways of performing it—deep plowing with the common plow, and using the sub-soil plow in the furrow after the common one. Where the sub-soil is cold and wet, we decidedly prefer using the sub-soil plow. Where the sub-soil is so composed that pulverization and aration are only required to render it fertile, it may be an advantage to break and bring it to the surface by the common plow. We feel confident, however, that in the region of which we are speaking, the sub-soil plow might be used in many cases with excellent effect.

Buildings, Barn-yards, Fences, &c.—The buildings through this district are generally in good repair. Many of the houses are of a superior style—are convenient and well finished, and are sometimes tastefully ornamented with trees and shrubbery. Less care and judgment is generally shown about the barns and outbuildings. In planning and locating these, convenience, taste, and economy, seem to have been too often disregarded. The improvident waste of manures from this cause, is in some instances a glaring defect in farm management. Though the land is generally good, naturally, it is not all uniformly so, neither has it been equally well managed; and we saw some fields where the scantiness of vegetation showed plainly that the soil much needed the manure, which, on those very farms, was wasting away, by various means, from the barn-yard. We are happy to say that there are farms on which a judicious management, strikingly in contrast with the above, is observable. Such an instance was met with in the farm of Seth Langdon, New-Haven. The admirable neatness of this farm attracts the eye of the traveller the moment he comes within its limits. The barns and sheds are so placed as to form a hollow-square. Mangers are fixed under the sheds for feeding cattle, (the sheep are kept in another place,) water is brought to the yard, and none of the cattle, except the working oxen, are allowed to go out of the yard in winter. They are fed, (all but some of the young cattle,) in the barns at night; and during the day are fed in the sheds, with the poorer sorts of fodder—a place for depositing which, is provided in one corner of the yard. The manure is all received into the yard, which is so formed that none of it can be lost, but is all carefully cleaned up in the spring and carried to various parts of the farm. The stalls, particularly those for cows, were well contrived and neatly kept.

The fences generally preferred are cedar rails and stakes. It is laid in the form of what is called "worm fence," in some sections. The stakes are set at the corners, upright, which occasions much less inconvenience in cultivation than when they stand bracing. They are fastened by "yokes" made by boring three inch holes through suitable pieces of wood, which are slipped over the top of the stakes; two rails being generally laid above them, which complete the fence. Stone walls are sometimes made, and are, when well built, an excellent fence for all stock but sheep. But as sheep are the chief stock, and they are apt to run over stone walls, rail fence is most common. We saw in one or two instances a wall built of rather small stones, with layers of grass turf interlaid, and the top finished with turf. It was put up by a Scotchman as an experiment, and time enough has not yet elapsed to ascertain how it will answer. It is supposed that the grass will live and assist in holding the wall.

Grass Lands.—This section of country is particularly favorable to the growth of grass. Judging from appearances, it is our opinion that we have never seen any other land which is capable of sustaining as much stock to the acre. On the rich alluvions of the Scioto, we have seen fields which may perhaps produce as great a *weight* of grass per acre, but it does not appear to be as nutritive as the herbage of the best Vermont pastures. On these, the turf, which is of the thickest and finest kind, is composed mostly of the spear-grass, or Kentucky blue-grass, (*Poa pratensis*,) with other grasses and white clover enough for variety. The hay made from these lands is of the most nutritive quality. We were shown samples in which the natural greenness of the grass was preserved almost unchanged, giving a delightful fragrance, it being almost as nicely cured as the famous "Shaker herbs." Stock of all kinds will, and *do* actually fatten on this hay. It is a fact that oxen bought in the fall in only store condition, if properly sheltered and fed with such hay, become in the spring fit for slaughter, and are sent to Brighton market without any other feeding. In fact, so excellent is the hay which is made here, and so fine is the pasturage, that some of the best "grass beef" that is bought for the Brighton market is found here.

In an article on the "Agriculture of Addison county," in the New-York State Agricultural Society's Transactions for 1844," written by S. W. Jewett, some remarkable facts are stated in reference to a tract of this county said to be "fifteen miles in length and eleven wide—about one-half unimproved, covered with timber. This tract comprises six towns, averaging each five miles square."

"The census of 1840, enumerates 7,000 inhabitants; about 1,400 of this number were employed in agriculture. The number of *tons of hay* produced, were rising fifty-one thousand; *neat cattle*, nineteen thousand head; *sheep*, one hundred and forty-four thousand; and two thousand one hundred *horses*. If we include four more adjoining towns, we swell the number of sheep to two hundred and forty thousand six hundred and sixty-four."

Sheep.—The most important description of live stock for this section, is sheep, and these are kept in larger numbers in proportion to population and extent of territory, than in any other part of the United States. The Merinos, full blood, and high grades of that variety and the Saxons, are generally kept. The Merinos were carried to this section at different times and by different persons from twenty to thirty years ago. It is a well established fact that all animals undergo changes to some extent, on being removed from a country they have long inhabited to one of a different soil and climate. This we think has been the case with the Merinos first transferred to this district. The fertility of the pastures, the regular and abundant supply of nutritive food the year round, with the healthfulness of the location, have effected a visible change in the constitutional character of the animal. First, their general size has been enlarged. Every one who passes through this section, and observes the various flocks he may chance to meet, will see that their average size is considerably greater than that of Merinos commonly met with in other sections. Second, the fleece, especially of the larger class of sheep, and those which, having been bred here for some time have become fully acclimated, has generally lost something of its original fineness; but the capacity to bear a larger quantity of wool has been evidently increased, accompanied by improved hardiness and vigor of constitution, a thicker skin, and an adaptedness to the climate which leaves nothing in this respect to be desired. The increase in the weight of the fleece has been in some cases in a greater ratio than the increase in the weight of the carcass,—the wool being both longer in staple, and more thickly set on the body. Numerous cases were made known to us by honorable and veracious men, of breeding ewes (Merinos) rearing lambs every year, having for several successive seasons yielded from five and a half to six pounds of well washed wool per fleece; and of bucks yielding from ten to twelve, and in one or two instances thirteen pounds. In most cases we examined the identical animals to which we allude, and took from them samples of wool, which we can now show. The flocks which came under especial notice, were those of S. W. Jewett, Wightman Chapman, and Mr. James, of Weybridge; M. Bingham and A. L. Bingham, of Cornwall; L. O. Burchard, Ex-Governor Jenison, L. C. Remelee, M. W. C. Wright and John T. Rich, of Shoreham; Seth Langdon and Alvan Squires, of New-Haven; Charles L. Smith, of Bristol; C. B. Cook, of Charlotte; Henry S. Morse, of Shelburn.

Mr. Rich's flock consists mostly of the Merino stock purchased by his father, the late Hon. Charles Rich, of Andrew Cock, late of Flushing, Long-Island. They have short legs, compact bodies, and heavy fleeces, though not as fine in staple as some Merinos. Of a lot of one hundred and forty-seven ewes which Mr. Rich sheared last year, one hundred and five gave a fraction over five pounds per fleece, on the average. Mr. Rich has for the last two seasons been breeding from a buck bred by the Hon. William Jervis. This buck, called *Consul*, now owned by Mr. Rich, is the sire of Mr. Jewett's famous buck *Fortune*. Consul is a buck of great value—is ten years old, yet he sheared last year ten pounds of washed wool, of excellent quality for Merino. Old as he is, his fleece is still well set, and we presume will not this year fall much, if any, short of its former weight.

Mr. Jewett's flock consists of descendants from the imported Merinos of Messrs. Humphrey, Jarvis, D'Wolf, Cuff and Cock, with some purchased of William Davies, Esq., of Poughkeepsie. The buck Fortune was the produce of a ewe of the Cock stock, by the buck of Mr. Jarvis's breeding before mentioned. He is a large bodied, short legged sheep, carrying an enormous fleece of about medium quality. His average fleece has been eleven and a half pounds. He is now six years old. The lambs of his get are large, well formed, and strong. When we were there, two hundred and twenty-seven of Mr. J.'s ewes had lambed, and he had two hundred and twenty-five lambs alive and well. The lambs of the other two ewes were yeaned dead—so that every lamb was saved that was born alive. The loss from Mr.

Jewett's flock of six hundred and forty-three, was only two, from Nov. 1, to May 1. Mr. J. has many good ewes.

Mr. **Wright** and Mr. **Remelee** have some first rate sheep. We can hardly avoid particular reference to two of Mr. Remelee's ewes, which he purchased of Mr. Jarvis. .With the exception of a trifle more length of leg than we should wish, they are in fleece and carcass about all that could be desired in Merino sheep. One of them especially, is almost a model of excellence. Their wool is beautiful, as all will admit who will examine the samples we took. The fleece of one, last year, weighed six pounds and an ounce, and that of the other six pounds. Each reared a lamb—one of which, by Mr. Wright's buck "Black-Hawk," now has a lamb, and though but little more than a year old, will give, we should think, six pounds of nice wool. The old ewes have also fine lambs this season.

Mr. **Burchard** has heretofore bred the Saxons, and many of his flock now show the characteristics of that variety. He has, however, been latterly infusing into the flock the blood of the heavier fleeced and stronger constitutioned Merino. He has some very pretty stock—some of his bucks are in all respects good samples of the finer wooled class of sheep.

We happened to call at Mr. A. L. **Bingham's** farm in his absence, and consequently had not the opportunity of seeing his buck called Vermont Hero, which is own brother to Fortune. He is represented to be a remarkable animal, and we regretted not being able to find him. In the flock of **Merril Bingham**, there are many large, well shaped, heavy fleeced sheep. Seeing them in large fields only, we could not examine them so particularly as if they had been in yards. He and his brother, A. L. Bingham, have lately purchased of the Shakers a flock of very heavy Merino ewes. Mr. **Chapman** has some good sheep from ewes having considerable Saxon blood crossed with Fortune. Mr. **Langdon** has also very good sheep. A yearling ram of his, from a ewe of Mr. Atwood's stock, of Litchfield county, Ct., is very superior. Mr. **Cook** has several ewes also from Mr. Atwood's stock, which are very good. Mr. **Squires** has a large flock. Many of his ewes strongly show the Saxon blood. He owns the buck called Don Pedro, formerly owned by Mr. Jewett. Though this buck is declared to be a full blood Merino, descended directly from the importation of Col. Humphrey, (which by the way we see no good reason for disputing,) we do not hesitate to say his wool is too coarse—coarser than should be encouraged for Merino. The *quantity* of wool he has yielded, however, is unprecedented. He is seven years old, and when we saw him had been sheared six times—the fleece of the present year not having then been shorn. The aggregate weight of his fleece is sixty-seven pounds and one ounce. Calling the weight of his fleece this year equal to that of the last, (12 lbs. 6 ozs., and it will not vary much from it,) the whole quantity of wool yielded by this buck in seven years, would amount to seventy-nine pounds and seven ounces! To do the animal justice, we are bound to say that he has great vigor of constitution, and the most perfect symmetry of carcass we have ever seen in a Merino sheep.

Mr. **Morse** has about two thousand sheep, of good quality, but as we intend speaking more fully of his farm in our next number, particulars are here omitted. We have much more to say of Vermont farming, and shall resume the subject next month.

ITEMS FOR THE SEASON.

Grass Seed.—One of the most successful and economical modes of securing timothy seed, and which is practiced by some farmers to great advantage, is to reap the tops of the grass while it is yet standing in the meadow, to be afterwards thrashed and cleaned, and then the rest of the grass is mowed and manufactured into hay. The seed thus costs only the labor of cutting and thrashing, the remainder affording the usual crop of hay.

Mixing manure with the soil is of the greatest consequence; and it is especially so when applied in the latter part of summer for the wheat crop. Wheat will not bear an abundant supply of unmixed manure, buried in large masses and lumps beneath the soil. When manure therefore is spread, it should be harrowed at least half a dozen times well, with the surface soil, before the plow turns it under. It thus becomes thoroughly broken, the soil is made mellow, and the whole is well intermixed. So important is this operation, that one-half or even one-third the manure will sometimes be equally efficacious where this practice is adopted.

Trimming Young Trees.—It oftens becomes necessary at midsummer, to trim the side branches of young trees, for the purpose of throwing the strength of the growth into an upright form. But if the side branches are cut closely, the main stem becomes too slender to support the mass of leaves and branches forming the top, and the tree assumes a bending or crooked form. To obviate this difficulty, trim the branches within about half an inch of the stem, leaving short stumps, with the leaves at their base. These assist in some degree the lateral growth of the stem, and serve to stiffen it, and which may be afterwards cut closely to the stem. An attention to this particular, will often save much trouble in staking up crooked trees.

THE TRUFFLE AND "TUCKAHOE."

There are probably many people who never heard of the truffle, and the number in this country who even saw or tasted a vegetable known by that name, is quite small. We have often heard of the plant called at the south "tuckahoe," or sometimes "Indian bread," but having never seen one, had no idea till lately that it was closely allied to, if not identical with some of the European species of truffle. Our attention has been particularly called to this subject by reading an article in the May number of the *Southern Planter*, written by C. Campbell. He gives an extract from a description of the tuckahoe plant, written by the late Hon. James M. Garnett; from which description, compared with that given by European writers of the truffle, we should have little doubt of their near relationship. Mr. Garnett says of the tuckahoe: "It is indeed a great botanical curiosity, for it has neither root in the ground nor stem above, but grows a few inches below the surface, apparently as unconnected with the soil as a buried cannon-ball would be. It is oval in shape, and varies in size from that of a goose-egg to that of a man's head. The coat is rough, and of a dark brown color—the inner substance is very white, similar in texture to that of the yam, and of an insipid taste."

Johnston's Encyclopedia describes the truffle as—"A round fungus growing under ground in many parts of southern Europe, destitute of roots and leafy appendages. It absorbs nutriment at every point on its surface. The truffle is composed of globular vesicles, destined for the reproduction of the vegetable. * * * Each globular vesicle is fitted to give origin to a multitude of reproductive bodies, but a few of them only perfect the young vegetable. The parent dies; the trufinelles are nourished by its dissolving substance, and the cavity it originally filled becomes the abode of a multitude of young truffles; but many of them die, the stronger starving the weaker. The truffle is one of the most wholesome and nutritive of the esculent fungi, and is generally discovered by means of dogs, which are taught to scent it; so that on meeting the truffle they bark and scratch it up. Truffles are highly esteemed at the tables of the luxurious, where they are served up either roasted in a fresh state like potatoes, or they are dried, shred, and dressed as ingredients in soups and ragouts."

In Virginia, it is said, the tuckahoe is discovered by hogs, these animals being fond of eating it, and scenting to a considerable depth in the ground.

Liquid Manure.—The Chinese, who are particularly skilful in the management of manure, are extremely careful not to waste the smallest portion; and, according to Sir George Staunton, they prefer the dung of birds to that of all others, and next to that night-soil, which they apply in a liquid state.

ENTOMOLOGY—KILLING WORMS WITH SALT, &c.

Very often, a paragraph gets started, and goes the rounds, (as one has lately done) stating that an application of salt to plants, will keep them from being killed by worms; or that salt so used will actually kill the worms. How much injury is done by such recommendations, it is impossible to tell; but if any one having plants exposed to the depredations of worms, should think to preserve them by following such prescriptions, he will be very likely to be disappointed. We are authorized to say this from *experience*, having often tried salt as a protection against worms, and never found it to answer. We have placed it around corn, cucumbers, cabbages, &c., in such quantity that the plants suffered from it, without its having the least apparent effect to check the worms. The "cut-worms," or those which do their work above-ground, cutting off the plant at its surface, crawl over the salt without noticing it, and the worms which work underground, feeding on the roots, "pursue the even tenor of their way," alike undisturbed. We once put five different species of worms in a stone-jar with earth. The earth was kept moist and salted at various times—turning out the earth and counting the worms every two or three days, to see if the salt occasioned the death of any, or in any way affected them. Finding all "alive and well" at each counting, we continued to salt them till we had applied at the rate of over forty bushels to the acre, with no difference in the result. The occurrence of an accident broke off the experiment, which prevented us from ascertaining the precise quantity of salt which an acre would require to kill the worms that might be in the soil. But as before remarked, we have ascertained from several trials, that it will take less salt to kill vegetation, than it would to kill worms; so that in conducting an experiment the former consequence may be first expected.

In articles written on the subject of insects, there is too frequently an indefiniteness, and in some cases an inconsistency, which renders them worse than useless, as they only promulgate error. Great mistakes are committed from an ignorance of the habits of insects, particularly of their transformations. All insects when they have acquired their full growth in the larva or worm state, pass into the chrysalis or pupa, and thence into the perfect or fly-state. Those of the same species, placed under the same circumstances, hatch nearly at the same time, and of course finish their first period and are changed to the chrysalis all together. From the time they are hatched till shortly before they pass to the next stage, their voracity increases; but when they have attained their full growth and the time for transformation arrives, they suddenly cease feeding, and the ordinary observer sees them no more.

Now we have known instances of farmers becoming greatly alarmed at the devastation committed by worms on their field crops; but not having examined with sufficient attention, they did not become aware of the prevalence of the insect, till its size and the wide-spread destruction it had occasioned, showed it to be nearly full-grown, and that its predatory labors were, of course, nearly ended. In this state of the case, the farmer, anxious to check the injury, sows his fields at once with salt, ashes, or lime. He sows all alike, however—he makes no experiment which teaches anything—he makes no division of the ground, marked by metes and bounds,—applying the supposed remedy to some lots, and not applying it to others,—as should be done to understand the results. In a few days, the worms, in accordance with their natural organization and habits, stop eating; and descending into the earth (as is the habit of some tribes,) prepare for transformation. The farmer examines his crops—the mischief has been stopped, the worms are gone, and he exults in the faith that *"salt has done the work for 'em!"*

Another instance of error in entomology lately met our eye in the *Boston Cultivator*, and from that has been copied extensively into other papers. The writer asserts that—"the cut-worm would not be found in corn, were it not planted in sward or sod land. They are the progeny of a species of beetle or other insect, which could never propagate its kind without the aid of dung which is found in grass-fields that have been fed by horses or cattle, and in this they inclose their eggs, and sink them a given distance below the surface."

Here are several errors which may be productive of greater or less injury. In the first place, it is too much to say that "the cut-worm would not be found in corn if it were not planted on sod ground." It may, to be sure, be somewhat uncertain what species of insect is here alluded to under the name of "cut-worm," but the term is usually applied to those worms which eat off the young stems of plants, generally at the surface of the ground, though sometimes a slight depth below the surface. They are known by entomologists under the name of AGROTIDIDÆ, or Field Moths. The group includes several species—we cannot say how many are known in this country—we have been acquainted with five or six; but none of them are "beetles," as this writer supposes—they are all *moths*, or "millers." We ascertained this more than twenty years ago, by taking some of the larva as they were about to pass into the chrysalis state and confining them till their transformation was completed. Dr. Harris has well described these insects. He says:—"Most of these moths come forth in July and August and soon afterwards lay their eggs in the ground, in plowed fields, gardens, and meadows."

The assertion of the writer in the Boston Cultivator, that "the insect could never propagate its kind without the aid of *dung* in grass-fields which have been fed by horses or cattle," must have been made without a proper knowledge of the subject, and the same remark will apply to his *history* of the insect. The worm, he says, "is the progeny of a species of beetle, or other insect?" This statement, *in one or the other of its parts*, is undoubtedly correct! But from what follows in regard to the eggs being deposited in "*dung*," the writer had evidently taken the dung-ball beetle, (*scarabaus relictus?*) as the parent of the "cut-worm!" Many persons may have seen numbers of cut-worms on meadows where cattle and horses were never pastured, and where none of their "dung" could be found. The insect is found mostly on sod grounds, but the eggs are laid, as stated by Dr. Harris, in the above quotation, "in plowed fields, gardens, and meadows," and the larva are of course found more or less in all these situations.

FOWLS IN YARDS.

Hens kept in small yards, often acquire the habit of plucking out each other's feathers. Some particular individuals, generally the cocks, are made the subjects to be despoiled of their plumage for the amusement or satisfaction of the rest. The habit sometimes becomes so inveterate that it is almost impossible to check it, and the plucking is continued till the victims are stripped almost naked—till in some cases even their crops and entrails are torn out. We could never fully understand the cause of this unnatural appetite, though from its being seldom seen in fowls which have their liberty, it seems reasonable that it is induced by confinement. But whether it results from mere fretfulness, or from a want of some kinds of food which they are able to procure when allowed to run at large, is uncertain. When fowls are allowed to select their food, as they do when unconfined, it consists of a great variety. Besides all kinds of grain, they eat largely of grass or green vegetables, as well as animal substances. The animal food is generally supplied by insects—worms, beetles, grasshoppers, &c. As condiments, they eat flinty gravel and lime; frequently taking liberal draughts of water. They dust themselves in clean, fine sand if they can get it; but ashes, if not too strong, may perhaps be better. It is obvious that their food when they are kept in a confined state, should conform as nearly as possible to what they would prefer if allowed to choose for themselves. A patch of clean grass should, if practicable, be allowed in their enclosure, and as a substitute for insects, butchers' offals might be given them. If they have not sufficient grass, they should be fed twice a day with lettuce, cabbage, or tender plantain leaves, of all which they are fond. We have noticed that they appear to prefer lucerne to almost any other herbage, and on this account it might be an object to have their yard well set with this plant. Gravel, and lime or pounded lime stone, must not be omitted, and it must be *fresh and clean.*

It seems strange that fowls should quietly submit to have their feathers drawn out in the manner described. We have seen roosters stand perfectly still while two or three hens were round them, each occasionally plucking a feather, which was generally swallowed. A little cringing by the rooster, when a feather required an uncommon *jerk*, was all the ado made. When a spot on the body of the fowl is once plucked bare, it is generally kept so—the young feathers just as they appear through the skin, seeming to be preferred. They are then full of bloody juices. Can any one explain the cause of this morbid appetite, or tell us the best way of keeping fowls in a yard?

TREES IN DROUTH.

The past spring having been unusually dry, some interesting observations have been made in relation to the influence of different modes of treatment, for securing success in transplanting.

All fruit and other trees, as soon as they are taken from the soil, should have the roots immediately immersed in mud prepared for the occasion. This coats the surface, prevents drying, and when the tree is set out, continuous contact is maintained between the soil and the roots. Small apple trees, the leaves of which were half an inch to an inch long, and set out in dry weather, and suffered much in consequence, one-third of them dying, and the rest of them lingering with little growth during summer. Another portion of the same lot of trees were immersed in mud. Not one in ten of these died, and those which lived, made, the same year, double the growth of those which were unmudded. Several experiments made the present year, fully confirm the eminent advantages of thus coating the roots with mud.

Another important requisite in setting out young trees, and especially so if they are set out in spring, is pouring in water to settle the earth among the fine roots. Many trees are lost solely in consequence of the cavities in the earth, in contact with the roots, occasioned by a careless manner of shovelling in the earth; half a pail of water dashed in, fills these cavities, and settles the soil closely among the roots, without packing it to hardness. A row of twenty peach trees,. set out this spring, and treated in this way, are all growing vigorously, and are from two weeks to one month ahead of another row, where this precaution was omitted.

In very dry seasons, during the latter part of spring and the early part of summer, it sometimes happens that trees well set out suffer seriously from drouth, and not unfrequently perish from a want of moisture. Water is applied as a remedy; but it often happens that the hard surface prevents it from sinking deep into the soil, the surface only becomes wet, and afterwards bakes to a crust, while the roots are little benefitted. To obviate this difficulty, remove carefully, with a hoe or spade, several inches of soil from above the roots, then pour into the cavity thus formed, half a pail of water, and as soon as it settles into the earth replace the earth. The roots thus receive the direct benefit of the water, and the surface of the earth is left mellow. A neighbor, who had set out many trees last autumn, and fearing a loss of half of them, was directed to water them by the mode here recommended. He did so, and now all of them are doing well, except one doubtful tree. Similar success attended the practice of the writer, where a row of peach trees were set out in his absence, without mudding the roots, or dashing in water. During the late severe drouth, nearly all of them presented a very discouraging appearance; but they were thoroughly watered by a removal of the surface earth as just described, and now all of them are growing.

It is familiar to most intelligent cultivators, that nothing tends more effectually to retain the moisture of the soil than constantly stirring and mellowing the surface. At the same time, it promotes the growth of young trees to a degree almost incredible to one, who has never tried it. Hence a constant and thorough mellowing of the surface of the ground for many feet around such trees, by spading or other effectual mode of loosening, is at this season of the year of the most vital consequence.

PEA-BUG—*Brachus pisa.*

Everybody has seen peas with weevils in them. While the pea is growing and the pod is soft, the parent insect punctures the pod exactly opposite the young pea and deposits an egg. From this egg a maggot soon proceeds, which works its way directly into the pea, and feeds on its substance. The larva reaches its full size, and passes into the pupa state in the fall, and the succeeding spring emerges from the pea a winged beetle or weevil. The maggot may sometimes be detected in green peas, and Dr. Harris observes that few persons while indulging in this luxury are "aware how many insects they unconsciously swallow." By close examination, a small dark spot may be seen on the pea, and on opening it the maggot may be discovered. The germ of the pea is not always (perhaps not generally) destroyed by the insect, but the pea is rendered unfit for culinary purposes. This is a serious injury, as all will acknowledge who are acquainted with the value of dry peas used in soups, and other forms, on the table.

In this country, the insect is much less common in Canada and the more northern portions of the United States, than further south. In Maine and Vermont, for example, they occasion but little damage, peas being there raised which are perfectly sound and free from bugs, and meet with ready sale in our large cities. The attack of the insect may, however, be in some degree obviated in any section. It is ascertained that its operations are only continued through a portion of the season, and by late sowing it may be avoided. But there is one objection to late sowing. In districts subject to great, heat and which are also liable to long drouths, a good crop of peas can only be obtained by early sowing, as the crop will not bear excessive heat. In planting peas infested with bugs, it is always advisable to kill the insects in some way. This may be effectually done by pouring boiling water on the peas, and stirring them well for a few minutes. It will not much affect the vegetating powers of the pea. In some cases, where the germ has been laid bare by the gnawings of the insect, it may be killed, but we have often practiced the mode, and found no particular objection to it.

But we lately noticed a recommendation of Dr. J. T. Plummer in the Indiana Farmer and Gardener, which is worthy of trial, as it will not only destroy the bug in its incipient stage, but may also render the pea fit for the table. His mode is to scald them immediately after they are gathered, keeping them in water, turned on boiling, for one minute. Dr. P. states further, that placing peas as soon as gathered in jugs or bottles, hermetically sealed, will keep them well, and that nothing can be seen the next year but the speck in which the larva died.

MILK SICKNESS.

We see that the discussion of the cause of this disease, is again revived. We had supposed it was pretty well settled that the "trembles," or "milk-sickness," was occasioned by a plant. Dr. Drake, of Cincinnati, published a pamphlet on the subject a few years since, in which the disease was attributed to the *Rhus texicodendron*, or "poison-oak." Some observing men, however, who agree with Dr. D. that the disease is caused by a *plant*, have dissented from the opinion that it is produced by the one he has named. The poison-oak is frequently found in sections where no milk-sickness has ever been known. Experiments, also, have been made by feeding it to certain animals, and no ill consequences were produced. Mr. Thomas S. Hinde, of Mt. Carmel, Illinois, who has devoted much study and observation to the subject of milk-sickness, is confident that he has traced the origin of this disease to a plant; but is confident that the plant is not the poison-oak. He states that he has both the poison-oak and the plant to which he attributes the disease, growing in his garden, and that they are evidently of different species. Their qualities, also, as he and some others seem to have proved, are very different—the poison-oak, when eaten by cattle or other animals, occasioning no bad effects, and the other plant producing sickness or death, when fed to calves, cows, oxen, and even men, as has been shown by experiments. Mr. Hinde thinks the plant which produces the sickness is a *nondescript;* though he is inclined to think it belongs to the genus *Rhus,* of which, as above mentioned, the poison-oak is a species.

Some communications have lately appeared in the *Prairie Farmer,* designed to show that the milk-sickness is caused by poisonous mineral substances held in solution by water, or from poisonous springs. From the facts cited, there seems to be no doubt that the water of particular places has produced sickness, both in men and cattle, but we are unable to say that it was the true milk-sickness. There is at least this objection to the theory that this sickness is caused by poisonous water, viz: that it has greatly prevailed in many situations where no such water has ever been discovered. The Mud river valley, in Ohio, for instance, a region noted for the abundance and purity of its water, was formerly very subject to milk-sickness. It seems that cultivation, and the substitution of cultivated grasses for the plants of wild growth, have there, as in other places, banished this dreadful malady.

We would feel obliged if Mr. Hinde would send us a leaf of the plant growing in his garden, which he thinks is the cause of the disease above mentioned.

ULTRAISMS.

A paper from Dr. MUSE, president of the Dorchester (Md.) Farmers' Club, was read before that association in April last, a copy of which, by a resolution of the Club, has been forwarded us for publication. A great press of other matters prevents our giving space to the whole; the following extracts, however, exhibit the substance of the article:

"The mind of man is too apt on most subjects, and especially those of deep interest, to run off, unconsciously into a state of "*ultraism*"—and from one point, discovered to be defective, to an opposite one equally at variance with the sober dictates of reason, whose counsels, if seriously invoked, would readily afford a corrective to the frequent and fatal errors of extravagance; leading to the disappointment and frustration of our hopes, and purposes.

On the subject before us, this error has, in my humble opinion, been committed—and some of the novelties, in relation to the improvement of crops and soils—by a short recipe—have been too highly appreciated, and may thereby become pernicious; yet, I hold it to be quite reasonable to anticipate advantages, from some of them, as auxiliaries—but unreasonable to conjecture the possibility of such great results as are promised by their inventors.

Chemical solutions—poudrette—guano, and electricity are each, offered by their respective advocates, to the practical farmer, as an *agricultural catholicon*—a remedy curative and preventive of all the ills and diseases incident to his various crops.

In respect to the chemical solutions, it is wholly inconceivable that a grain of wheat, or other seed, should absorb from a steep of the highest degree of concentration all the requisite food contained in ordinary manures: it is admitted that one essential element—nitrogen—is required in but small portions—but it is very doubtful whether all the demands of the plant for this material, may be supplied in this manner, with the aid of the atmospheric source alone; these contribute a large portion, unquestionably of this element, as well as of carbonic acid, &c., &c., but the structure of the spongioles of the roots demonstrate that the *roots* as well as the *leaves*—the *earth* as well as the *air* furnish a share of the nutritive gasses and other soluble substances placed in it by accident or design; which experience has settled beyond the power of a possible refutation.

Where, I would ask, will be found the potash—the soda—the lime—the magnesia—the silicates—the phosphates, and the other essential materials of the plant, not in the barren sand before named; neither will they be found in the *air,* for they are not vaporable—nor in the *steep,* and yet the plant must find them or perish.

Be assured, gentlemen, we must hold on to the compost heaps; if properly made, these will supply the *deficit* essentials, which the steeps did not possess, and which the small volume of the seed could not contain."

Dr. Muse thinks it is probable that the use of steeps, as well as the application of electricity, may prove of essential service in agriculture; and he states that he is himself conducting several experiments in regard to these subjects, the results of which will be made public.

ENORMOUS OAK TREE.

Six miles W. S. W. of Saintes (in the Lower Charente) stands an old oak tree, which promises yet to live many centuries, if the axe of some Vandal does not cut it down. The following are the dimensions of this monarch of the forests of France, and probably of all Europe:—

Diameter of the trunk at the ground,	27 to 30	feet.
" at the height of a man,...	20 to 22	"
" at the base of princ'l br'hs,	3 to 6	"
" of the whole head,......	120 to 130	"
Height of the trunk,...............	24	"
" of the branches,...........	66	"

A room, with a circular seat, has been cut out of the heart wood of the trunk, from nine to twelve feet in diameter, and nine feet high. A table may be placed in the middle, round which twelve persons can sit. It is adorned with a living carpet of ferns, lichens, &c. Upon a plate of wood, taken from the trunk, about the height of the door, two hundred concentric annual rings have been counted, whence its results, in taking a horizontal radius from the exterior circumference to the centre of the oak, there must have been from 1800 to 2000 of these rings, which makes its age nearly 2000 years.

CULTIVATION OF WHEAT.

An interesting experiment, showing at the same time, the benefits of stirring the soil, and also the danger of drawing false conclusions, is given by L. Vernon Harcourt, in the agricultural department of the London *Gardener's Chronicle.*

He had seen a statement that the tailings of wheat, called "chickenscraps," being, in fact, only the refuse of the grain, would yet produce a good crop of the heaviest, fullest seed. Disbelieving it, and being desirous of undeceiving the farmers by proving its fallacy, he proceeded to try the experiment. Accordingly, a small plat of ground was sown, one-half with good wheat, and the other half with tailings. On returning home after an absence of some weeks in the spring, he was surprised to find the latter covering the ground as thick as the grass on a meadow; but found, upon inquiry, that the person having charge of the experiment, considering the seed good for nothing, had sown five or six times as much of it as of the other. As this thwarted the design of a comparison, half the thick sown was directed to be hoed out till of the same thickness as the other from good seed. The other half of the thick sown was left to take its chance. At harvest, the first twelve plants in one row of each sort, were taken as a sample; and the produce weighed as follows:

	Grains.	Av. ears pr. pl't.
12 plants from good seed weighed........	926	6.6
12 plants from tailings left thick weighed .	351	3.8
12 plants of the same thinned, weighed...	1133	7.8

It is of course evident to every intelligent person that the increase in the product of the hoed portion was owing to the cultivation by hoeing, which is further proved by the meagre supply from the unhoed wheat from the tailings. But the experiment performed under other circumstances, and with other seed, might have led to very erroneous conclusions.

MANUFACTURE OF CHEESE.

The following is an extract from the statement of Alonzo L. Fish, of Herkimer county, who received the first premium of the New-York State Agricultural Society, for the best cheese dairy, in 1844.

Calves' rennets *only* are used after being dried one year. There are less animal properties in them than in new rennets, and will not make cheese swell in warm weather, and on shrinking, leave them like honey comb, full of holes, with a rank flavor.

Calves, whose rennets are designed for cheese making, are not allowed to suck sick cows, or those giving bad milk, but are fed a plenty of good milk, from five to ten days old; twelve or fifteen hours after sucking, when the gastric juices are most abundant and pure, the rennet is taken out and stretched on a bow; as much fine salt is added as will adhere without draining, and hung in good air to dry. Milking is done in tin pails, strained through a large tin strainer into a tin vat, where it is not skimmed nor moved till the cheese is made. The pails are set into a common sap bucket, which being light and smaller at bottom than top, a little press on the pail will fasten the bucket to it so that it carries with the pail without any inconvenience. A light tap on the bucket will drop it, and leave the pail clean and not bruised. A tin vat, large enough to hold the milk, is set within a *larger wooden vat*, with one inch space between the sides and bottoms of the two, to admit water, which is cooled by ice and heated by steam, which water cools the milk to take out the animal heat, warms it to receive rennet, remains and heats whey and scalds curd. It is discharged by a cock to pass off into a tub, and scalds bran or meal for slop feed, when it is required. Scalded feed is required daily when the cows are milked, on hay feed. A large reservoir is built of stone and cement to contain fifty hogshead of rain water from buildings, to discharge by a cock into the above described space into a steam generator or into a tub, or any other place in the lower rooms, where it is desired. A pump affords water to this apparatus in case of drouth. Thus the same water is made to perform three distinct offices, by no more labor than to turn three cocks with thumb and finger.

After water in the reservoir is not wanted for cheese making, a pipe conducts it into the top of ice house to freeze in solid mass in winter, for cooling milk the next season. No skimmer, pail or dipper, is required about this apparatus, only to milk in, as the cream which rises over night is not separated, nor no dipping of milk, whey or water. The heating is done daily, by a handful of chips, or four quarts of charcoal, and all shift of apparatus can be made with one hand while the other is employed in the milk or curd. A young man is hired at $11 per month, for eight months, to take the whole charge of nursing, feeding, making and take care of milk and cheese through the summer, and does no other business. He is required to keep a register, daily, of the variation (if any) of heat, salt, quality and effect of rennet, number of cows milked, quantity of milk from which cheese is made, condition of curd when put to press, when cheese is put on shelf that it is weighed and numbered upon the bandage, so that when cured the result of certain variations may be known. An inch pipe passes from the steam generator and discharges steam into water under the tin vat; in ten minutes the whole mass is warmed to ninety degrees to receive rennet. The steam is then turned off (which would otherwise be lost) into a tub which stands high enough to discharge into the cheese vat and scald it after the cheese is made. Hot water is drawn at any time from the same to cleanse pails, cloth hoops, &c. Calves' rennets only are used, after being one year dry, they being less apt to make cheese swell in warm weather, and of better flavor. A piece of rennet, to bring curd in forty minutes, is pounded fine in an iron mortar, and soaked a short time in warm water mixed with a little annatto, drained, strained and put into the milk. When come, the curd is cut in large pieces with a wood knife, thickest in the middle, to give it a slight pressure before there is much surface exposed to be rinsed by whey; after standing ten minutes, the pieces are cut smaller with the same knife, then broken up by putting the hands to the bottom of the tub, bringing them through to the top, with fingers spread, with a slow motion, to give it all a slight pressure without tearing fine while tender; heat is kept as high as eighty-eight degrees while working; steam let on; the motion and pressure with hands increased with increase of heat and toughness of curd; heat is kept up to continue the action of the rennet, as it is most active when warm; heat raised to ninety-eight degrees; the steam is then turned off; it is kept at that heat thirty minutes. The scalding is now done; the water and whey are discharged, one pound of fine salt to fifty of curd is added, while warm, to shrink the curd and prevent holes in the cheese. After getting cool it is put to press; the pressure is from five to seven tons; in six hours is turned into clean cloth, and again in twelve hours more is taken out of the press and put upon the shelf, weighed, bandaged, greased with oil of whey butter, turned daily. No greater heat is ever used in the operation than the natural heat of milk, (ninety-eight degrees.)

FATTENING OF PORK IN IRELAND.

We notice in the Louisville *Journal*, an article on the "Provision Trade of Ireland," evidently written by a man who understands the subject. He informs us that the Irish pork, which in the English markets is preferred to any other, is fattened almost entirely on *potatoes*. He says:—

> "The pork of Ireland is raised and fattened *exclusively* by the peasantry on cooked potatoes, with occasionally very little oats. I never knew an instance of more than ten hogs being fattened by one man for sale, and this is a very rare occurrence. The great bulk of them are got from men who fatten but one or two hogs."

The writer is of the opinion that the "*best brands*" of beef can be put up in the western section of our country, and sent into the British market so as to pay a handsome profit; but of pork he has doubts whether even the best can be sent there to any advantage. On this point he remarks:—

> "We know that a division of labor on any thing is sure to produce a more perfect article and at a cheaper rate. Just look at the ease and cheapness with which an Irish peasant can fatten his one or two hogs, almost entirely from the refuse of his family table, and see how superior the flesh of that animal must be that is constantly fed from its birth on good cooked food."

Our principal object in making the above extract is, to check the prevalence of what we believe to be erroneous impressions. The first of which is, that pork made from potatoes is *not good*—and second, that hogs *cannot be fattened on potatoes*. The latter opinion has latterly received considerable support from some distinguished French chemists. It may be proper to remark, however, that other chemists, Liebig, Johnston, &c., do not agree to this conclusion, which the experience and observation of many farmers shows to be fallacious.

FARM ACCOUNTS—PREMIUM.

Editor Cultivator—The writer of this note is engaged in compiling a *Family Almanac*, and *Repository of Useful Knowledge*, for 1846, and wishes among other things to aid farmers and house keepers in keeping regular accounts of their *business, income*, expenditures, &c. It is believed that by presenting proper forms for doing it, a great many families may be induced to adopt this very important and useful, but generally neglected practice. A premium of $10 is therefore hereby offered for the best *form* or *mode* of keeping farming accounts in detail; and $5 for the best form of keeping household or family accounts. Will some of your readers who are in the practice of keeping such accounts, transcribe or copy enough of the same to show the plan or mode, from which a selection may be made? Communications (post paid) will be received till the 20th of August, addressed *A. F. W.*, Washington, D. C.

Washington, June, 1845.

Notices of New Publications.

"THE FRUITS AND FRUIT TREES OF AMERICA."

When we announced this work, in our May No., it was supposed that it would have been published on the first of May; but circumstances, beyond the control of the author or publisher, have delayed its publication till the latter part of the last month. We had then only seen the proof-sheets—we have now the work complete, in a beautiful volume of 600 pages—a perfect treasure to the fruit-grower. It embraces the entire subject,—production of new varieties, propagation by grafting, budding, &c—soil, transplanting, position and culture, training, pruning, diseases and enemies, with accurate descriptions of 186 varieties of apples—7 of almonds—16 apricots—4 berberries—77 cherries—10 currants—the cranberry—12 figs—40 goosberries—47 grapes—the mulberry, walnuts, chestnuts, and filberts—97 plums—223 pears—79 peaches—18 nectarines—5 quinces—14 raspberries—2 blackberries, and 36 strawberries, with tables of select lists from each kind. In addition, that nothing might be wanting to make the work complete, we have directions for the culture and management of oranges, lemons, limes, citrons, shaddocks, olives, pomegranates, and the different varieties of melons—the whole illustrated, whenever necessary, with engravings, amounting in all to over 200. The book shows the thorough devotion of the author to his subject, as well as his indefatigable research and untiring industry, and is an honor alike to its author and his country. That it will have a rapid and extensive sale, and tend immensely to increase the growing taste for the production and enjoyment of the finer varieties of fruits, is beyond a question.

New-York: Wiley & Putnam—Price $1.50.

WASHINGTON'S LETTERS ON AGRICULTURE.

Fac similes of Letters from His Excellency George Washington, *President of the United States of America, to Sir* John Sinclair, *Bart., M. P., on Agriculture and other interesting Topics; engraved from the original Letters, so as to be an exact fac simile of the Hand-Writing.* Washington: Published by Franklin Knight.

It is well known that General Washington was much devoted to the improvement of agriculture. A true statesman, he regarded the prosperity of this great interest, as the basis of national independence. It is, however, a matter of surprise, that amid the arduous cares and duties which devolved on him as Chief Magistrate, and as commander-in-chief, he should have found time to direct so much attention to this object. In addition to his official business—which was invariably transacted with the greatest promptness and precision—he not only continued the general direction of operations on his large estates, but by a regular correspondence with the most enlightened agriculturists of this country and Europe, advised himself of every discovery and improvement in husbandry. The letters before us, furnish evidence of his zeal, as well as sound practical sense and good management in relation to rural affairs. As an example in point, we give from the work an extract from his letter to Sir John Sinclair, dated at Philadelphia, July 20th, 1794:

"After the peace of Paris in 1783, and my return to the occupations of a farmer, I paid particular attention to my breed of sheep, of which I usually kept about seven or eight hundred. By this attention, at the shearing of 1789, the fleeces yielded me the average of five and a quarter pounds of wool—a fleece of which, promiscuously taken, I sent to Mr. Arthur Young, who put it, for examination, into the hands of manufacturers. These, pronounced it to be equal in quality to the Kentish wool. In this same year, 1789, I was again called from home, and have not had it in my power since to pay much attention to my farm—the consequence of which is, that my sheep, at the last shearing, yielded me not more than two and a half pounds. Nor is the difference between good and bad management confined to this species of stock, for we find that good pastures and proper attention, can and does fill our markets with beef of seven, eight and more hundred weight, the four quarters; whereas from 450 to 500, (especially in the States south of this, where less attention has been paid to grass,) may be found about the average weight. In this market [Philadelphia] some bullocks were killed in the months of March and April last, the weight of which, as taken from the accounts which were published at the time, you will find in a paper enclosed. These were pampered steers, but from 800 to 1000 the four quarters, is no uncommon weight."

In relation to the facilities afforded by this country for keeping sheep, Gen. Washington adds:—"The climate of this country, particularly that of the middle States, is congenial to this species of animal; but want of attention to them in most farmers, added to the obstacles which prevent the importation of a better kind, by men who would be at the expense, contributes not a little to the present inferiority we experience."

The race of sheep once highly celebrated as "the Arlington breed," originated with Gen. Washington. This was probably the stock above mentioned, the wool of which is spoken of as resembling the "Kentish wool." They were produced, according to the history given by Mr. Custis to Mr. Livingston, [see Livingston's "Essay on Sheep," pp. 57, 58,] from the progeny of a Persian ram, crossed with sheep which Gen. W. obtained from Bakewell—the latter afterwards known as the Dishly or Leicester breed.

The letters are accompanied by some introductory and supplementary remarks from the compiler, to which is added a tribute to the character of Gen. Washington, "by the late Hon. George Canning, Prime Minister of England;" all in the highest degree interesting, as showing the respect and esteem with which the character of our revered countryman has been regarded by distinguished foreigners, whose only motive to praise must have been a heart-felt admiration of his virtues.

We are informed in the introduction that the originals, from which these letters are exact copies, were to be deposited in the British Museum, "as the precious relics of a great man fit to be preserved in that valuable repository." Sir John Sinclair was evidently an ardent friend of General Washington, whom he eulogises as one "whose character must ever be revered, even by those with whom he contended either in war or politics, as containing as much good with as little alloy, as that of any individual whose memory is recorded in history."

Canning bestows even a still higher eulogium. He says:—"The whole range of history does not present to our view a character upon which we can dwell with such entire and unmixed admiration. *The long life of Gen. Washington is not stained by a single blot.*" * * * "He was a man in whom the elements seemed so blended that 'Nature might have stood up to all the world,' and owned him as her work. His fame, bound to no country, will be confined to no age." * * * "The character of Gen. Washington, which his contemporaries revere and admire, will be transmitted to posterity, and the memory of his virtues, while patriotism and virtue are held sacred among men, will remain undiminished!"

AUSTRALIA.

According to the account given by Capt. Wilkes of the United States Exploring Expedition, the inducements for emigration to Australia, are not great. Capt. W. spent considerable time at New South Wales, which is the principal settlement of the Island, and collected many facts in regard to the soil, climate, natural resources, &c. He states that a large portion of the country is naturally barren—that much of the land devoted to pasturage, requires a hundred acres to keep five head of cattle. Nearly the whole island is subject to great extremes of drouth, followed by torrents of rain. "These drouths are sometimes of such long continuance, that we at one time read of the whole country having been burnt up for want of rain, a famine threatened, and the sheep and cattle perishing in immense numbers." An instance of this kind is mentioned by Capt. W. as having occurred in 1790, when it is said, "All the live stock which had been imported for breeding was killed off for food, and the inhabitants were reduced to an ear of corn per day. From the exhaustion which prevailed, all labor was suspended."

The drouths, he remarks, "have been succeeded by long-continued rains, which have raised the rivers thirty or forty feet, flooded the whole country, deluged the towns and villages, and completely destroyed the crops. The cattle, stacks, buildings, and sometimes even the inhabitants are swept away. It is stated that in 1839, which was considered a wet season, "twenty thousand sheep were lost in the valley of the Hawkesbury by the floods." These evils, it is added, "appear to be of frequent occurrence, and the settler in New South Wales has to contend with elements in an unusual degree."

Owing to the irregularity of the seasons, it is said, "there are hardly any streams that merit the name of rivers. It is necessary to guard against being misled by the inspection of maps of the country, and forming from them, the idea that it is well watered. Such an impression would be erroneous, and yet the maps are not inaccurate; streams do actually exist in the places where they are laid down on the maps; but for the greater part of every year no more is to be seen than the beds or courses, in which, during the season of floods, or after long-continued rains, absolute torrents of water flow, but which will within the short space of a month again become a string of deep pools. Were it not for this peculiar provision of nature, the country for the greater part of the year would be without water, and consequently, uninhabitable."

During the long-continued drouths to which the country is so subject, the vegetation is also liable to great injury from hot blighting winds, which are thus spoken of:

"The prevailing westerly winds sweep with force over the whole country, blighting all they touch. The effect of these hot winds is remarkable, for they will in a few hours entirely destroy the crops, by extracting all the moisture from the grain, even after it is formed and almost ready for harvest; and the only portion that is left, is that which has been sheltered by trees, hedges or fences. They thus destroy the prospects of the husbandman when his crops are ready for the sickle."

WOOL-GROWING

We have received through the *Washington County Post*, an article on this subject, written by **Wm. McKie**, Esq., of Salem, N. Y. It appears that some person had desired Mr. McK.'s opinion as to the most advisable course for the wool-growers of this region to pursue that they may be enabled to compete successfully with the increase of the wool-growing interest of the west. To this Mr. McKie replies that he thinks it is as yet undecided whether *fine* wool can be grown extensively in the west; but he has no doubt that the "coarser and more middling grades can be grown successfully, and at prices that would be ruinous to the wool-grower of the north." He however recommends "a medium course" for the northern farmers, in regard to the quality of their wool. He says—"However favorably I may be impressed with regard to the Saxons, I would not recommend the pure bloods to any but the skilful. I would recommend the cross Saxony, or in other words, the pure Merino crossed by the Saxon. An equal cross is desirable."

He speaks highly of the Saxon flock of Daniel Rogers, in Rensselaer county, derived from the importation of Mr. Grove, as standing in very high repute, and from which he could advise a selection of breeding stock. He speaks highly also of "the Campbell flock," in Jackson, Washington county, which he says can be recommended in the highest terms. He states the blood as pure Merino crossed by pure Saxon. That the wool is very soft, fine, and silky, averaging three pounds to the fleece; and is in high estimation with the manufacturers for its felting properties, &c. He observes that—"light fleeces and fine wool, are generally considered synonymous;" but this he shows is a mistake, and that we should regard quantity as well as quality, which there is no difficulty in combining. A great reason with Mr. McKie for encouraging the growth of fine wool, is the supposed probability that we may have to resort to exportation for a market, and that in this exigency fine wools could alone remunerate the grower—the coarser and middling grades being produced by other countries—at a less rate than can be done even from the prairies of the west.

In regard to preparing wool for market, Mr. McKie advises the greatest care in washing and cleansing. He says—"The practice of dipping the flock, and then huddling them together in a yard, for some two hours previous to washing, is a mode that all wool growers of distinction would be likely to practice, when made acquainted with the beneficial results. Great care should be taken to avoid dusty roads going up from the washing, and in providing clean pastures for the flocks, between that and the clipping." He discountenances the practice of letting sheep run two or three weeks after washing before they are sheared, "for the oil to come out." From three to six days, he thinks, (and reasonably too,) is long enough for all practical purposes. He states that some wool-growers in putting up their fleeces "are in the abominable practice of *carefully concealing* from three to four ounces of the most filthy unwashed dags in the centre of each fleece." He recommends that the fleeces be prepared in "the best possible manner, which will enable one to reach the highest price, besides giving the satisfaction of having done *right*."

NEW-YORK STATE AG. SOCIETY.

The monthly meeting of the Executive Committee for June, was held at the Society's Room, Albany, on the 12th—**Geo. Vail**, Esq. in the chair.

Mr. Tucker reported a list of Questions to be answered by the applicants for Premiums on Farms, which were approved, and ordered to be issued in a circular. In addition to the Premiums of $50—$30, and $20, on Farms, it was resolved to give single volumes or sets of the Society's Transactions, to all who furnish answers to the questions, according to the value of the reports thus furnished.

A letter was read from the **President**, recommending that the next meeting of the Executive Committe be held at Utica, whereupon it was

Resolved, That the next regular meeting of the Executive Committee be held at Bagg's Hotel in Utica, on Thursday, the 10th of July, at 10 o'clock A. M.; and that the Committees to award Premiums at the State Fair, be appointed at that time.

A letter was read from Mr. **Wm. Wandall**, of Sing Sing, on the subject of destroying the wild onion, and asking the Society's advice as to the best way of making it public. The Committee advised its communication through the agricultural papers.

☞ All applicants for Premiums on Farms, can obtain Circulars, containing the regulations and questions to be answered, on application to **Luther Tucker**, Rec. Sec'y, Albany, or to any of the officers of the Society in different parts of the state.

ASPARAGUS.

Mr. **Wightman Chapman**, of Middlebury, Vt., raised the finest Asparagus we ever tasted. Noticing its superiority, we inquired how it was grown. Mr. C. said it was raised by what he called the French mode. Instead of making a deep trench as in the ordinary way, he selected a piece of thick sward in a rich place, made up a good compost of old manure, muck, and loam, and raised a bed to the height of twelve or fifteen inches, into which he set the roots. There is certainly "no mistake" about the extra size and unusual richness of the asparagus which we saw and ate, produced in this way.

Mansfield, Conn., has the honor of manufacturing more silk than any other town in this country. In 1793, 260 lbs. were raised, and in 1830, 3,200 lbs.—most of which was manufactured by hand. Since 1830, less has been grown, but the manufacture of foreign silk is carried on to a considerable extent in factories. There are eight factories—most for sewings and twist—the others for cords, tassels, &c.

FOREIGN INTELLIGENCE.

We have our regular files of foreign papers to June 2d. They speak in positive terms of the favorable appearance of the English wheat crop. The Mark-Lane Express says—"We may safely venture to state that a finer prospect for a crop never presented itself within the memory of the oldest man living." Cold north-easterly winds had prevailed considerably through May, yet from frequent showers, the supply of grass had become abundant, and but little doubt was entertained of a heavy hay crop. The appearance of the barley and oats, including beans and peas, it is said was never better; though vegetation in general is rather more backward than usual. The prices of bread-stuffs are still low, but are a little improving. The epidemic among cattle, which it was thought at one time had subsided, has broken out afresh in some districts, and great losses have been sustained. The importation to England of foreign live stock increases, much to the dissatisfaction of British farmers. During May, no less than 900 cattle, and 200 sheep were imported from Holland to London and the various outports, being as is stated, the largest number received in one month since the tariff laws were passed. The number of oxen and cows imported at the various English ports, from the continent during the year ending with May, was 2,241 and of sheep 1,063. Accounts from Scotland and Ireland, are highly favorable for the grain-crops.

Royal Agricultural Society.—The Half-years meeting of this society was held in London on the 22d of May. Lord Portman was elected President for the ensuing year. This society is in prosperous circumstances—its number of members is 6,933. Its present amount of invested capital is £8,200. The next Annual Show will be held a Shrewsbury, the inhabitants of which city have contributed £1000 towards defraying the expenses. Principal day of the show July 17th. At the late meeting, Mr. Colman presented to the council of the society, a specimen of New-Jersey marl. The council referred the specimens and Mr. Colman's communication on the subject to Mr. Pusey and Dr. Buckland.

Improved Sheep.—We have more than once mentioned a variety of sheep, a cross of the Cotswold and Down, bred by John Twynham, Hampshire, England, which have attracted much notice. From a late account of the "Stockbridge Cattle-Show," we perceive that the reputation of Mr. Twynham's sheep is increasing,—he having carried two prizes at this show, for the best bucks of any breed or cross.

The export of wool from New South Wales in 1815 was 32,971 lbs.; in 1835 it was 3,863,227 lbs.; and since then the quantity has increased fifteen fold.

The German papers state that M. Liebig, has discovered a mineral substance, which, when combined with guano, will produce one of the most fertilizing manures known. It is added, that a company, with a capital of 120,000*l* sterling, composed for the most part of leading English capitalists, was formed for the purpose of carrying on, upon a large scale, the manufacture of the new compound.

Eggs Pickled.—The farmers' dames in some parts of Hampshire, in their notable endeavors to turn everything to good account, have acquired much fame for pickling eggs, which, while they constitute a somewhat novel feature in the catalogue of condiments generally, are at the same time particularly relishing. When eggs are plentiful, they take from four to six dozen of such as are newly laid, and cause them to be boiled hard; then, divesting them of the shells, they place them in large mouthed earthen jars, and pour upon them scalding vinegar, well seasoned with whole pepper, allspice, ginger, and a few cloves of garlic. When the pickle is cold, the jars are stopped down quite close, and the former will be fit for use in the course of a month afterwards. The eggs thus treated are excellent, and are held in high esteem by all the farm-house epicures in that part of England.

Advantages of draining.—Robert Ferguson, of Muirhouselaw, entered upon a lease of 21 years; the farm a cold wet soil; and though of considerable extent, it seldom produced more than 20 or 25 small stacks of grain, and other produce in proportion. During the first three years of the lease, many miles of drains were made and filled with small broken stones. The expense of opening the drains was borne by the proprietor of the land; and the expense of quarrying the stone, breaking, and filling the drains, was borne by the spirited tenant. The result is, the stack yard, instead of being only in part filled with a scanty produce as formerly, is now quite insufficient to contain the crop, which consists of 75 or 80 large stacks of grain, and a corresponding supply of hay, turneps, and other produce.

The celebrated Short-horned Bulls "Sir Thomas Fairfax," calved in April 1837, and the "Earl of Durham," calved in 1841, are dead.

THE NEW POSTAGE LAW.

The new law in relation to postage, goes into effect on the first of this month. The only change in the law, which will affect "The Cultivator," is that which provides that all newspapers may be sent *free* to all post-offices within 30 miles of the place of publication. The postage on "The Cultivator," will therefore hereafter be as follows:

1. To all offices within 30 miles of Albany—*free*.
2. To all post-offices in the State, or if out of the State, within 100 miles of Albany—1 cent.
3. For any greater distance than 100 miles, if out of the State—1½ cent.

Letter Postage.—In relation to the postage on letters, the new law makes very important changes, viz:

1. The *franking privilege* of Postmasters, by which publishers of periodicals have heretofore been so much benefitted, is abolished.
2. All letters are hereafter to be charged by *weight*, instead of by the number of pieces they may contain.
3. There is to be but two rates of postage for distance, all letters of *half an ounce* weight, or less, to be charged *five* cents for any distance less than 300 miles, and *ten* cents, for any distance over 300 miles—for every additional half ounce, these rates are to be doubled.

Pamphlets and Magazines are hereafter to be charged by weight, the postage being for one ounce, 2½ cents, no matter what the distance, and 1 cent for each additional ounce.

Circulars, Handbills, &c. of no larger size than a sheet of common writing paper, two cents.

Transmission of Money for Newspapers.—The following important regulation has been issued by the Postmaster General:

> Money may be left with a postmaster, in no instance exceeding ten dollars, for the purpose of being paid to distant publishers, if said publishers shall so desire, for any newspaper or pamphlet, deliverable from his office. The postmaster may retain one per cent. and give his receipt for the balance. He is immediately to report the payment, with the names of the parties, to the postmaster, through whom said amount is to be paid to the publisher, and to charge himself upon his "general account with the United States," with the amount received, deducting the one per cent. under the head of "moneys received for subscriptious;" stating the name of the payor, the name of the payee, office where payable, amount, and time when received, and shall make a full and faithful return to the General Post Office of all such cases at the end of each quarter. When presented, the postmaster at the office where payable, is to pay the amount in said receipt, deducting one per cent., which receipt, after being endorsed by the publisher, he will forward as his voucher of payment. He will enter said amount to his credit on his "general account with the United States," under the head of "moneys paid for subscriptions," giving the particulars above stated, and render to the General Post Office a full and faithful account of the same at the end of each month.

Thus, if we understand it aright, a person wishing to remit to us $10, for the Cultivator, may pay it with 10 cents fees, to the postmaster, and take his receipt for the money, which receipt he must forward to us, on the presentation of which to the postmaster here, we shall get the $10, by paying the 10 cents to which the postmaster here is entitled as his commission.

Paying Postage.—Notwithstanding the great reduction of postage, it is still important that our friends should remember that all business letters should be **post-paid**. To each individual who writes us, this will be a trifling matter; but to those who receive from 25 to 75 letters a day, as we frequently do, the tax would be onerous indeed, if we have the postage to pay.

SALE OF MR. PRENTICE'S SHORT-HORNS.

Agreeably to previous notice, the sale of Mr. E. P. Prentice's herd of improved short-horned cattle took place on the 25th of last month. The day of the sale proved favorable—the occurrence of showers on the day preceding having produced a delightful purity of air, and an increased greenness and freshness of vegetation, which seemed to invest Mount Hope with more, even, than its usual attractions.

A numerous and highly respectable company from this and several other States, assembled early in the day, and after spending several hours in the examination of stock, and having partaken of refreshments, which were served in a beautiful grove, the sale commenced. It was conducted in a very spirited manner by L. F. Allen, Esq., assisted by Mr. Jones as auctioneer. The cattle were in fine condition, and passed rapidly under the hammer. Forty-one animals were sold at prices varying from $25 to $225, and averaging $112.75 per head. The prices, in general, may be considered low, when the high cost of the original stock and the acknowledged excellence of the herd offered, are considered; yet it should be remembered that the sale was positive—that there was no underbidding, or buying in.

COWS.

Flora—8 years old, J. B. Nott, Guilderland,	$215 00
Moss Rose—8 years old, J. W. Wheeler, Hyde Park,	140 00
Catharine—6 years old, M. Bates, New-York,	105 00
Snow Ball—11 years old, E. H. Smith, Smithtown, L. I.,	110 00
Melissa—8 years old, W. S. Packer, Brooklyn,	120 00
Cora—4 years old, Dr. Jas. McNaughton, Albany,	125 00
Daisy—7 years old, do do do	105 00
Diana—6 years old, J. W. Bishop Berkshire co. Mass.,	155 00
Charlotte—5 years old, do do	190 00
Ada—4 years old, R. H. Green, Winslow, Maine,	170 00
Appolonia—10 years old, J. P. Brayton, Bethlehem,	160 00
Louisa—5 years old, R. H. Green, Winslow, Maine,	150 00
Splendor—11 years old, W. S. Packer, Brooklyn,	190 00
Jenny—4 years old, Edward H. Smith,	105 00
Aurora—10 years old, J. B. Nott, Guilderland,	145 00
Miss Smith—8 years old, P. W. Tuthill,	80 00

HEIFERS AND HEIFER CALVES.

Caty—11 months old, W. S. Packer, Brooklyn,	$100 00
Comely—4 months old, Wm. Kelly, Rhinebeck,	70 00
Nun—3 years old, do do	110 00
Meg—1 year old, Wm. Kelly, Rhinebeck	65 00
Nell—3 years old, M. Bates, New-York.	225 00
Betty—6 months old, Wm. Kelly, Rhinebeck,	55 00
Rover—1 year old, V. P. Douw, Albany.	70 00
Calf, 2 weeks old, J. H. Prentice, Brooklyn,	60 00
Calf, 2 months old, W. S. Packer,	45 00
Burley—1 year old, V. P. Douw, Albany,	80 00
Peggy—3 years old, J P. Brayton, Bethlehem,	200 00
Peggy, 2d—4 months old, V. P. Douw, Albany,	110 00
Ramble—1 year old, W. S. Packer, Brooklyn,	75 00
Jilt—10 months old. Wm. Kelly, Rhinebeck,	60 00
Calf, 1 month old, J. P. Walker,	77 50

BULLS AND BULL CALVES.

Calf, 1 month old, W. S. Packer, Brooklyn,	$40 00
Blaize—4 months old, R. H. Green, Winslow, Maine,	55 00
Tyro—5 months old, J. B. Nott, Guilderland,	55 00
Tecumseh—1 year old, W. S. Packer, Brooklyn,	200 00
Calf, 2 weeks old, J P. Walker,	30 00
Calf 1 month old, W. Kelly	75 00
Duke—6 months old, Gen. Kimball, Newfane, Vermont,	200 00
Calf, 3 days old, J. P. Walker,	25 00
Timour—11 months old, M. J. Hayes, Montreal,	80 00
Fairfax—5 years old, W. S. Packer,	205 00
	$4,622 50
Forty-one animals, averaging	$112 75

Of the other nine animals on the catalogue, four, (Matilda, Sally, Judy and Esterville,) were reserved by Mr. Prentice, agreeably to the terms of his advertisement—one, (Caroline,) was withdrawn for want of a bid—one cow, (Dutchess,) and a calf, died—another, (Dora,) was sick, and O'Connell, by a vote of the company, unsolicited by Mr. P., was withdrawn.

WHENCE DO ANIMALS DERIVE THEIR FAT.

The theory has lately been put forth by some European chemists, that such plants only as contain oil, or the elements of fat, can fatten animals. A late number of the Quarterly Journal of Agriculture, contains an article, translated from the French, on the "Fatting of Cattle, and the Formation of Milk, by M. M. Dumas, Boussingault, and Payen." In this this article, the theory above-mentioned, is strongly and elaborately defended. It is obvious that the subject involves a matter of great practical importance, viz: that of selecting the proper plants for the fattening of animals and the production of butter. The researches of the chemist and philosopher, may be of service in deciding this point, though it appears to us that in the adoption of new theories, we should be careful that they are not opposed to well-established facts. A sensible writer has well remarked, that "perhaps nothing has done so much to discredit, amongst the mass of farmers the probability of profitably making the science of chemistry available for the purposes of agriculture, as repeated assertions made by chemists, either at variance with, or only partially founded on facts." It strikes us that the article to which we allude is in some particulars obnoxious to this charge. In advocating the theory that animals have not been known to fatten on food devoid of fat, it is stated that hogs have not been known to fatten on potatoes! At the conclusion of the article, the writer gives a summary of the conclusions arrived at, among which it is laid down, "that potatoes, mangel wurtzel, and carrots, only fatten so far as they are joined with products containing fat substance, such as straw, the seeds of cereal plants, bean, or oil-cake." It will hardly be necessary to refer to particular cases to show that this conclusion is at variance with facts—the experience of many a Yankee, and we doubt not that of many an Irishman, contradicts it. Are there not to be found many persons who have fattened animals on potatoes or carrots? We have often fattened animals on potatoes, with no additional food than such a quantity of straw or hay as was was necessary to give proper distention to the bowels, and assist the animal to "raise the cud," and never saw better beef than from cattle thus fed. In some of the cases we have in mind, the whole quantity of food given, besides the potatoes, would not have been sufficient to sustain the animal in ordinary condition. So in regard to hogs, we have known many cases where the accumulation of fat could be attributed to nothing else but potatoes. We cannot cite cases where potatoes were the *only* food given, but the quantity of other kinds would never have fattened them.

The experiment, to which these French chemists refer in support of their theory, if well conducted in other respects, must, in our opinion, have been made with an inferior breed of hogs.

In a note attached to the article upon which we have made the above comments, is a remark in relation to the effect of carrots when given to milch cows, to which we wish to call the attention of our readers. It is said "This sort of food [carrots] is reserved for those cows which are not so good milkers, and whose milk it is wished *still farther to impoverish*, in order that it may serve as a substitute for woman's milk." Now we would inquire whether anything like the effect here indicated is known to follow the use of carrots for cows in this country? So far as we are acquainted, the effect of carrots is believed to be to make the milk *richer* instead of poorer.

PRICES OF AGRICULTURAL PRODUCTS.

New York, June 24, 1845.

COTTON.—The exports of Cotton, from 1st to 17th of June, were 16,986 bales. Prices, 5½a8½.

BUTTER.—Orange County, in tubs or pails, 15a18—New Western dairy, 11a18.

CHEESE—5½a7.

FLOUR—Best Genesee, $4.75—Ohio and Michigan, $4.50a $4.62½.

GRAIN—Wheat, nothing doing—Rye, 66a67—Corn, 45a48c.

HEMP—Dew rotted, per ton, $95—Dressed, $145.

HOPS—per lb. 13a14 cents.

HAMS—Pickled, per lb. 5a7 cents.

BEEF—Country Mess, $9 bbl.

LARD—per lb. 7½a8.

PORK—Per bbl. mess $12.50a$13—prime, $9.37a$9.50.

TOBACCO—Kentucky, per lb. 3 cents—Connecticut seed leaf, 8a10.

WOOL.—Boston, being the great wool-market, we give the prices of Wool in that city, as reported in the New-England Farmer of June 18th:

Prime or Saxony fleeces, washed per lb.	$0.40a0.43
American full blood fleeces,	37a0.38
" three-fourths blood fleeces,	35a0.36
" half blood do	32a0.33
" one-fourth blood and common,	30a0.31

BOMMER'S MANURE METHOD.

Interesting communication from Mr. Bommer, relative to his well known method for making manure.

TO THE AGRICULTURAL PUBLIC.

PRICE OF THE METHOD GREATLY REDUCED.—Until now I have maintained the prices fixed upon by myself and Abbott & Co.; prices which varied from six to twenty-five dollars, according to the size of the farms; and this I was obliged to do, because in accordance with our agreement, I was not at liberty to alter them. It was principally to gain this end that I bought out Messrs. Abbott & Co.

To render my work really popular, I have fixed its price so low, that each member of the whole agricultural community can purchase it. Henceforth it will be sold at the uniform price of FIVE DOLLARS for every farm in the Union—that is,

ONE RIGHT WITH ONE COPY OF THE METHOD FOR ANY ONE FARM

FIVE DOLLARS.

PRICE FOR WHOLESALE.—Agents, farmer clubs, bookstores, seedstores, agricultural repositories, offices of agricultural papers; in one word, such persons as will take a certain number of "Methods" at a time, either to be divided among their neighbors who have clubbed together, or for single sales at the price of five dollars, will have the "methods" for the following prices, viz.

For 5 Rights with 5 Methods or books, ... $20
" 12 " 12 " 40
" 30 or more " 30 or more " 40 per cent.
(Making only $3 per piece.)

All orders must be accompanied by the amount in *cash*, and directed to my office. 113 Greenwich-st. New-York city, or to my empowered Agents; in which case the "Methods" will be sent immediately.

Each package of "Methods" will contain a good number of Prospectuses or handbills, containing, 1st. A Synopsis of the matter contained in the "Method;" 2d. Documents and Reports from several authorities of the United States, approving the "Method" and acknowledging its practicability; 3d. Certificates from respectable, scientific and practical men, attesting the results which have been obtained from its application; 4th. Editorial articles, expressing the opionion of the press.

A WORD TO ENTERPRISING MEN.

Having succeeded in making known the advantages and the practical utility of my method to competent and disinterested men, whose characters are sufficiently known to the public to place their testimony beyond doubt; my "method" being patronized by the most eminent men of this country, Messrs Martin Van Buren, Gov. J. H Hammond, Gen. Wade Hampton, Gen. J. L. Means, Col. Singleton, Col. Hugh Lawson, Hon. J. R. Poinsett. W. B. Seabrook, Andrew Stevenson and others, who have adopted it; several thousands of the method having already been spread throughout the Union, the greater part of purchasers being eminent agriculturists; and all subscribers being satisfied with the work, my end has been attained, my task stops here; it is now a mere business matter, ready to receive the developments of which it is susceptible.

For these reasons, and desiring to employ my time in new researches and experiments, especially upon the subject of *transmutation* of dead into living vegetables. a highly important subject in agriculture, already hinted at in my work, but which is still in a problematical state, not reposing upon any solid basis; and to enable me also, in accordance with my former promises, to impart the results of those experiments to the subscribers of my method. I have resolved to cede my patent and method, either by Town, County, or by State. to single persons or to companies, on the most reasonable terms, the price of which will be fixed according to the agricultural importance of the Towns, Counties, or States.

Every purchaser of the patent for a Town, County, or State, will be supplied with such number of copies of the method, gratis, as may be agreed on.

NOTE.—The patent right *for* the State of New-York, (Long Island and Staten Island excepted;) *for* the ten eastern counties of New Jersey; *for* Frederick county, Maryland; and *for* about 40 towns in New England, have been ceded by me to several persons and companies. For all other states and territories in the Union, I can now dispose of the patent and method.

Herein I present a new branch of industry to enterprising, intelligent, and active men. It would be superfluous to enlarge upon its advantages, for it will be seen at a glance, by perusing documents, mentioned in the prospectuses, that my method enjoys a high reputation in the Union, and that this enterprise is in its nature as honorable as it is lucrative.

IMPORTANT NOTICE.

Having now given the best plan, taken the best measures for the prompt introduction of my "method" into agriculture, and done every thing, on my part, to enable every one to procure it at small expense, I notify those who should feel tempted to use this system, without being furnished with a right and a "method," that they will not only expose themselves to be prosecuted for an infringement of the patent, but lose their time and their money in vain trials, of which the result will be, if not totally unprofitable, at least very incomplete. Therefore, do not deceive yourselves, but be assured *of this truth*, that my large method is, to this day, the sole work in existence which contains the improved and complete system, and in which its application is rendered easy and profitable in all its branches In a word, its possession is the main condition of your success; first, because the whole work constitutes one chain of facts and principles, which are linked together and sustain each other, and form an inseparable whole which is indispensable to the proper comprehension of the system, enabling you to apply it in a really profitable manner. Secondly, because it contains, besides the process in question, a number of other instructions not less useful, the knowledge of which will aid and guide you, so as to put you in a way to derive from the system the greatest advantages and profits.

For these reasons, those who have formerly bought my small method, can have the large one *gratis*, by an application at my office, (postage paid,) or to my agents.

Those among you, who have faithfully tested the method and obtained satisfactory results, are respectfully requested to communicate with me. To those who have not tested its advantages, I recommend, by all means, carefully to conform to the instructions contained in the large method, in which case their success will be infallible.

STATEMENTS AND EXPLANATIONS CONCERNING THE "METHOD," AND THE RIGHTS ATTACHED TO IT.

When I first introduced this method into American agriculture, I judged it prudent, for many reasons, to publish at first, but a part of it; enough, however, to enable the intelligent farmer to succeed in the experiment. Before encountering the expense required to publish *in full* the fruits of my labors, I was anxious to ascertain if this system would be well received and properly appreciated by the agricultural public. My expectations were not disappointed, that trial having been crowned with entire success. Thus encouraged, it became my duty to persevere, and to give you the result of all my researches and experiments. This you will find in my new work, which I can say with confidence, is the key with which you can, by the exercise of a little intelligence and industry, double the product of your farms; for, in this work, the system is so much improved, its application rendered so easy, the whole so clearly explained, and so fully detailed, that if you conform to its prescriptions and instructions with scrupulous exactness, *success is certain*.

In the main, my method is based upon that known for some time in France as Jauffret's system; that is to say, I use the same materials; for, in my researches and experiments it became my duty to consult not only the small French pamphlet of Jauffret, but all other writings which have appeared upon the subject of agriculture, and especially of manure, in order to extract from them whatever, by experiment, should prove to be good, valuable, and useful to the object I had in view. The merit of this new system does not consist either in the materials, or in their combination. These materials have been known for ages as possessing fertilizing qualities, and every person at all acquainted with chemistry, knows that in mixing alkalis with animal matter, a mordant can be obtained which will produce fermentation in a heap of vegetables. This then, is not new; it is the numerous improvements and ameliorations connected with the application of these materials which give real importance to this new system. Therein lies the real progress of the art in the preparation and the application of manures, and therein consists the merit of the new edition of the *method*. True, Jauffret also undertook the application of this mixture, but he stopped half way. His process, such as described in his pamphlet, cannot be used with profit and success, and that for three cogent reasons. The first is: the meagre and incomplete instructions he gives to the operator upon the application of the system: the second, because the hand labor is too painful and expensive; and the third, because he did not discover, and consequently could not tell how to employ the air as a second agent of fermentation—a very important point in the operation, because without this aid, it is impossible to attain that degree of heat which is necessary perfectly to reduce vegetable matter into manure in a short time. Therein he failed, and therefore it remained for others to accomplish the work he had left incomplete. But although I have perhaps gone much farther than all others who have hitherto devoted their attention to this subject, I do not pretend to have closed the door to improvement by my method. The question of manure is so extensive that it embraces nearly the whole agricultural art, and will in due time advance to fullness by relying upon science and practice. In the meanwhile the great step is made, the fundamental bases are established, and the system. as explained in my new work, has been so well matured by my experiments, that I can affirm without fear of misleading any one, that any farmer, why will undertake to operate on my plan, will succeed, and I assure him that he will considerably augment the products of his farm be following my economical process in the preparation and application of his manure. Here the word "*economical*" is seriously intended. The system taken altogether is essentially economical; for, except a small quantity of lime, all the ingredients which enter into the composition of the caustic lye, (which, with the air, form the two agents of fermentation,) are found upon all farms, and cost nothing but the labor of gathering them.

Concerning the patent attached to my method, it is evident that it could only be granted for the improvement connected with the application of materials already known. You should know then, that the patented process is of the greatest advantage to the farmer, being the most economical, and the most easily reduced into practice. It is also the process now in use in every section of the Union. You should also understand, that in the patent this process is only described in general terms, and that, isolated from the "method," it is not likely to be of any value. To apply it with success, it is necessary to have my work for a guide

According to an agreement between myself and my agents, Messrs. Baer and Gouliart, the patent was issued under their name, and a part of it, comprising the right for the northern and eastern States, was immediately ceded to me by them, which transfer is duly recorded in the patent office, in Liber M. page 280 of transfers of patent rights. Then by a second transfer, made to me the 6th Nov. 1844, by Abbott, Baer and Gouliart, known as the firm Abbott & Co., the remaining part, comprising the right in the southern and western States, has also been ceded to me, which transfer is also recorded in the patent office, in Liber S. page 373: so that by virtue of these two acts, the patent, issued under the above names, now belongs entirely to me.

With regard to the "method" itself, that is to say, the book which contains the directions and instructions indispensable to the farther who wishes to apply the process; in a word, which contains the system complete in all its details, the property and the copyright appertain to myself exclusively, according to two legal acts entered in the clerk's office of the southern district of New York. Thus, these two rights, although distinct, are inseparable; that is, the patent cannot be profitable to any one without the method.

I was compelled to give these explanations and to make these statements, because all these matters have been agitated by the press as well as by private correspondence; and also, that for the future, each one may know to whom to apply in regard to this patent and method.

You should not lose sight of the fact that all the copies of the method are *signed and sealed* with my own hand,—a measure I have adopted to prevent imposition and fraud.

A CALL TO THE PRESS.

☞ Editors of agricultural periodicals, and of other papers having at least 400 farmer subscribers, are invited to publish the above communication; for which entire insertion, and perhaps some other articles to be sent by me afterwards, I offer every one three copies of the method; to be delivered to him immediately after the receipt of his paper containing the whole article. Such editors of agricultural papers of which I am not yet a subscriber, will please to send me their paper, and consider me as such. GEO. BOMMER.

Office 113 Greenwich-st., New-York city

July 1, 1845.—1t*

HOVEY'S STRAW CUTTER.

THIS machine has received the highest premiums of the Agricultural Societies of Massachusetts and New-York, and has given the most entire satisfaction wherever known. Some improvements which it has lately undergone, it is believed, render it as perfect an implement for its destined purpose, as can be desired. There are six different sizes—the prices of which, range from $12 to $35. The two largest sizes are suited to the application of horse-power, &c For sale in this city. Inquire at the office of "THE CULTIVATOR." July 1—tf.

VIRGINIA FARMS FOR SALE.

I HAVE for sale several good farms, being portions of the estate called Oak Hill, in Loudon county, Virginia, late the residence of President Monroe. It is about 30 miles from Washington, Alexandria and Georgetown—in a most healthy region, well watered and peculiarly calculated for raising stock of all kinds. To industrious and enterprising applicants, very liberal terms of payment will be given. S. L. GOUVERNEUR.

Washington, July 1, 1845—july 1—5t.

FARM FOR SALE.

IT consists of two lots, situated on opposite sides of the Albany and Schenectady turnpike, four miles from Albany. The lot on the north of the road, comprises forty, and that on the south, sixty acres. Both are enclosed by a good fence of boards with chestnut posts, erected a little more than a year ago. The lot on the south side has a small house, a stable with shed, and a good yard for manure, or stock. It is also provided with a well of excellent water. There are permanent streams of water on both lots. The stream called the Patroon's brook runs across the whole width of the south lot. With the exception of about a third of an acre on the north lot, both have been entirely cleared, drained where necessary, thoroughly plowed, seeded last year with clover and grasses, and will yield this season nearly or quite an average of two tons of hay to the acre. The two lots are suitable either for one farm or two farms, but will be sold together or separately, to suit purchasers. The natural position, as well as the soil of both lots is good, and cannot fail to give satisfaction. Every thing considered, a more desirable situation could scarcely be found in this vicinity.

For particulars, inquire at this office, or of JOHN McCARDELL, corner of Nassau and Pine-streets, New-York.

July 1—3t.

DR. VAN BUREN'S RHEUMATIC EMBROCATION.

RHEUMATISM ANNIHILATED.

THE proprietor of the Rheumatic Embrocation, comes before the public with increased confidence in the healing virtues of his remedy; for since he first offered it to the public, it has been tried in the worst possible, and most aggravated cases, over which it has completely triumphed; in some instances, where the patient had been given up by the attending physician as incurable; and in many cases where all the remedies advertised for the cure of rheumatism, had been faithfully used, without the least effect; thus proving itself superior to all other remedies ever offered to the public. The proprietor has received from various parts of the United States, and is receiving almost daily, the most flattering testimony to the curative powers of his Rheumatic Embrocation; and he feels now more justified than ever in asserting, that it is a never failing cure, in all the various forms of Rheumatism, Chronic or Inflammatory, and in all complaints of an analagous character, when faithfully and perseveringly employed. He cannot occupy the necessary space in an advertisement, or he would place before the public, the documentary evidence of the truth of his assertion. But though he cannot do this, he is willing at any time, to show them to all who may call upon him at his principal office, No. 56 Sand-street, Brooklyn, Long Island, N. Y.

Agents solicited from all parts of the United States and the Canadas, and dealt with on favorable terms. All communications must be post-paid. Price $1 per bottle. M. VAN BUREN.

July 1—1t* Sole Proprietor.

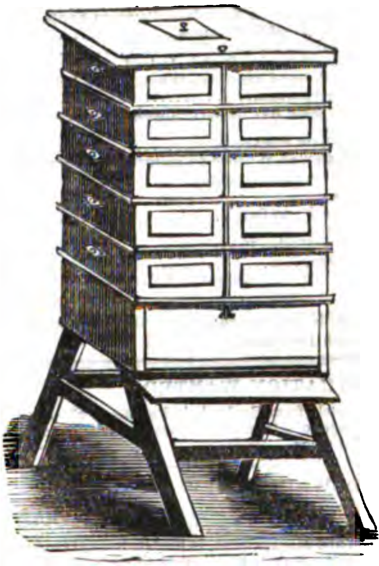
CENTRE DRAFT PLOWS.

D. PROUTY & Co., Nos. 19, 20, & 22, North Market-st. Boston, manufacture and keep for sale, a large assortment of the most improved Implements of Agriculture, including their celebrated CENTRE DRAFT PLOWS, Cultivators, Harrows, Straw-Cutters, Seed Sowers, Vegetable Cutters, Corn-Mills, Ox-Yokes, &c. &c. For the character of their plows, they have only to refer to those who have used them. The demand for them for a few years past, has been great—they having been sold extensively over the country from Maine to Louisiana, and the western States, as well as in the British Provinces; and have not failed to satisfy all purchasers of their great superiority in the qualities of neatness of workmanship, strength, durability, ease of draft, and complete execution of the work.

N. B. A few of these plows are for sale in Albany. Inquire at the office of THE CULTIVATOR.

July 1—tf.

MILHOLLAND & CRANE'S ENDLESS BEE-HIVE.



ONE of the greatest improvements of the age. One of the proprietors of this beautiful and ingenious invention, has been for some weeks in this and adjoining counties, introducing an improvement that promises an important change in the culture of the bee. Their hive is both new and simple, and so entirely adapted to the nature and wants of these wonder working insects, that the life and labors of the bees may be perpetuated in the same hive for twenty years, or even more, yielding from 60 to 100 pounds annually, of pure, delicious honey, in clean white comb, entirely deserted of young bees, bee bread, or old filthy comb. By their process of removing the accumulated honey, the bees are unharmed, and kept insensible to their losses, and are apparently stimulated to exertion to fill the hive by additional supplies of room as the bees may require. At the bottom of the hive, they are enabled to build a new set of comb throughout their abode every year, and produce each succeeding brood of young in combs which are new and clean, which is very essential to their increase of numbers, health and general prosperity; by a new and simple mode of colonising, the owner may at pleasure transfer a portion of his bees from full to empty hives, without having them swarm off in the open air, or ringing bells or beating pans, or exposing himself to be stung. In addition to its ornamental appearance, it is highly remunerative, and is so perfectly transparent, that the whole internal operations of the bees may be as minutely observed as the labors of any mechanical or laboring establishment. Thus a satisfactory knowledge may be obtained of a community of insects that have, in all ages and countries been the wonder and admiration of every one, from the philosopher to the untutored savage. The proprietor respectfully invites the inspection of practical bee men and others of taste, to his hive, which he will exhibit a few days at Wm. W. Wolford's hotel, corner of State and Hawk-streets.

Albany, June 19, 1845.—July 1—1t*

DURHAM BULL CALF AND HEIFERS.

THE subscriber will sell a Durham Bull Calf one year old 21st March 1844, a remarkable thrifty animal and good handler; when about 10 months old weighed 720 lbs. He was got by his prize bull Meteor. Also, a yearling and a two year old heifer, one got by Meteor, and one by the imported bull Duke of Wellington. Letters post-paid, will be answered. GEO. VAIL.

Troy, May 1, 1845—2t.

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☞ **ADVERTISEMENTS inserted in the Cultivator, at $1,00 per 100 words for each insertion.**

SITUATION WANTED.

A YOUNG man, lately from England, is desirous of obtaining a situation as manager of a farm. Good recommendations can be given. Inquire at this office. July 1—1t.

MR. DOWNING'S NEW WORK.

WILEY & PUTNAM, 161 Broadway, New-York, have just published "The Fruits and Fruit Trees of America, or, the Culture, Propagation and Management, in the Garden and Orchard, of Fruit Trees generally; with Descriptions of all the Finest Varieties of Fruit, native or foreign, cultivated in the gardens of this country. Illustrated with numerous engravings and outlines of fruit. By A. J. Downing. 1 vol. 12 mo., (and also 8 vo.)"

This is the most complete work ever published on the subject, and will, it is hoped, supply a desideratum long felt by amateurs and cultivators. July 1—1t.

TO FARMERS.

A GOOD farmer who is desirous of going west, may make an arrangement on favorable terms to himself, to come on an excellent and very extensive farm on shares, for a period of years. The farm is in northern Illinois, where it is perfectly healthy. One with a family, will have preference, and making the engagement, will enable him to look around and suit himself to a farm, in buying which, the advertiser will assist. Apply to Messrs. EDDY & STILES, Dixon, Lee county, Illinois.

July 1, 1845—1t.

FOR SALE.

THE farm of ROBERT WHITE, Jun., Shrewsbury, N. J., highly improved, and in the immediate vicinity of excellent marl. See N. Y. Journal of Commerce.

July 1—2t*

FARM IN ILLINOIS.

FOR SALE—A good farm, with valuable improvements. The subscriber being about changing his business, will sell a great bargain. Also has in immediate vicinity, 2,000 acres choice land, which he will sell at a discount from government price. Address ISAAC HINCKLEY, P. M., Audubon, Montgomery Co., Illinois.

EXOTIC, NURSERY, AND HORTICULTURAL GARDENS,

Flushing, L. I., near New-York.

THE subscribers having established a Nursery with the above title, with the determination of conducting it in the very *best* manner in all its departments, offer for sale, *at reasonable prices*, a *select* variety of FRUIT AND ORNAMENTAL TREES, Hardy Shrubs, Herbaceous Plants, Grape Vines of all the best kinds, superior Strawberries, Fastolf Raspberry, Gooseberries, &c. BULBS and TUBERS, superb CARNATIONS, DAHLIAS, &c., and a most extensive and choice collection of GREEN-HOUSE and STOVE PLANTS, embracing every thing *new* and *beautiful* in that department, personally selected in Europe during the past summer, of ROSES and CAMELLIAS

We have a very choice collection of the former, full 1,000 varieties, and of the latter nearly 300, all in fine order.

Catalogues of the above will be sent gratis to all applicants, *post-paid*, and every order promptly executed. From unknown correspondents, a remittance, draft, or satisfactory reference expected.

May 1, 1845—m. & jul. VALK & Co.

NORTH DEVON CALVES.

THE subscriber offers for sale 4 full blood North Devon Bulls and 2 heifer calves.

Two of the Bulls 5 and 6 months old, price each, ... $25
" " 11 " " 30
One of the Heifers, 12 months old, price, ... 30
" " 18 " " 40

They are beautiful animals, in fine condition, and of a suitable age to ship. Address JOHN P. E STANLEY,
46 South Calvert corner of Lombard-street.
Baltimore, Maryland, June 1—2t.

SEED STORE AND AGRICULTURAL WARE-HOUSE.

OUR Spring supply of seeds is now ready, and we shall be happy to receive orders for Field or Garden Seeds, of every description, Black Sea, Italian and Siberian Spring Wheat, Barley, Peas, Clover Seed, Timothy Seed, Seed Corn, Shaker and other Garden seeds, &c. Also, a full assortment of farming tools selected from the best manufacturers in the country. Hoes, Scythes, Forks, &c. cheap by the dozen. E. COMSTOCK.

Rome, Oneida county, March 1, 1845.

AURORA AGRICULTURAL INSTITUTE.

THIS Institution, recently opened, is located on a farm of over 200 acres, lying in, and directly adjoining the village of Aurora, on the east bank of Cayuga lake, in Cayuga county, New-York, 16 miles from Auburn, by stage, and 12 miles south from Cayuga Bridge and the Auburn and Rochester Railroad, by steamboat direct, in summer.

Its design is to afford every facility for young men to make themselves thoroughly acquainted with the principles of Agricultural science, and their judicious application to practical husbandry; and particularly to afford young men from our large towns, the most favorable advantages for preparing themselves for Agricultural pursuits.

Terms $150 a year, payable quarterly in advance. No person under fourteen years of age will, as a general rule, be received.

Pupils will be received at any time, and the course of instruction continued through the year without vacations, but permission of absence will be granted if requested.

Applications may be made to B. R. McIlvaine, 44 Great Jones st. New-York, to Rev. W. Roosevelt, 413 Broome-st., and Hon. B. R. Wood, or the Editor of the Cultivator, Albany.

CHARLES C. YOUNG, A. M., Proprietor and Principal.
ALEXANDER THOMPSON, A. M., M. D., Lecturer on Botany, Geology, Agricultural Chemistry, &c.
DAVID THOMAS, Visitor and Adviser.

May 1, 1845—3t.

ROME PLOW FACTORY.

THE DIAMOND PLOW which received the first premium at the State Fair at Poughkeepsie, as well as at every County Fair where it has been shown, is manufactured by the subscribers in the very best style, and for sale at wholesale or retail. Also, some eight or ten patterns of approved plans, as well as Scrapers, Cultivators, Cradles, Mott's Agricultural Furnaces, &c. Orders from abroad promptly filled, and a liberal discount to dealers.

March 1, 1845. BRAINERD & COMSTOCK.
Rome, Oneida county.

PLOWS.

AT the Syracuse Agricultural Warehouse and Seed Store, can be obtained Delano's celebrated Diamond Plow made by Mr Howard Delano, of Mottville, for the sale of which, we are sole agents for this town. Price, $6 for plain plow, and $10 for the wheel, coulter and clevey. Also, a full assortment of the well known Massachusetts Plow, made by Ruggles, Nourse & Mason of Worcester. 300 bushels seed barley, 300 do. pure Marrowfat Peas, 100 do. Clover seed, 150 do. Timothy, and a general assortment of all the varieties of seed sown by the tillers of the soil; Cultivators, corn plows, Wheel-barrows, Churns, Cheese Tubs, Cheese Cloth, Hoops and Presses, Hoes, Manure, Hay and Barley Forks, Shovels and Spades; and a very great variety of articles appertaining to the interest of the husbandman. Orders promptly executed.

Syracuse, April, 18[illegible].—3t. FOSTER & NOTT.

BOOKS FOR SALE.

AMERICAN Farmer's Encyclopedia, price $4—Skinner's Cattle Doctor, price 50 cents, and a variety of other works, for sale at the office of "The Cultivator."

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES

VOL. II. ALBANY, AUGUST, 1845. No. 8.

THE CULTIVATOR

Is published on the first of each month, at Albany, N. Y., by
LUTHER TUCKER, EDITOR AND PROPRIETOR.

ONE DOLLAR A YEAR.

SEVEN copies for $5—FIFTEEN copies for $10,00—all payments to be made in advance, and free of postage. ☞ All subscriptions to commence with the volume.

OFFICE IN NEW-YORK CITY, AT
M. H. NEWMAN'S BOOKSTORE, No. 199 BROADWAY,
where single numbers, or complete sets of the back volumes, can always be obtained.

Foreign Correspondence.

MR. NORTON'S LETTERS—NO. XIV.

Analysis of Slates—Importance of Chemical Investigation.

Laboratory. of Ag. Chem. Association,
Edinburgh, May 30, 1845.

L. TUCKER, Esq.—Among my other labors in the Laboratory, I have lately been engaged in an analysis of a series of slates, with a view to the agricultural capabilities of the soils formed by their decomposition. Such analyses are not diffiult in performance, and are, as I hope to show, of great importance to the practical man.

The seven slates of which I give the analyses, were from Wigtonshire, in the south-west corner of Scotland, and were picked up at random by Prof. Johnston, during one of his journeys in that section.

Without perplexing your readers by long descriptions of the process employed, I will only say that the powdered slate was first treated with muriatic acid, which dissolved the carbonates of lime and magnesia, and a large portion of iron and alumina. The remaining insoluble portion was then fused, and from it obtained the silica, the remainder of the iron and alumina, and the caustic lime and magnesia, all of these last having been in combination with the silica as silicates.

The alkalies, that is the potash and soda, were determined only by loss. The principal object sought was the lime, and this was determined with much care. The annexed tables will show, I think, that the investigation was not an unimportant one:

	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	No. 6.	No. 7.
Silica,.........	60.13	68.06	57.53	75.79	67.59	37.82	72.05
Iron and Alumina sol. in Mur. acid.	5.31	5.51	7.67	6.43	4.82	12.13	7.09
Do. obtained after fusion,.....	13.93	18.12	22.29	9.45	21.49	39.41	13.61
Carb'te of Lime,	12.77	0.46	3.54	0.45	0.39	......	0 34
Carb. Magnesia,	3.43	0.39	1.73	2.15	1.66	.....	0.35
Caustic Lime....	0.24	0.62	0.30	1.00	0.43	0.50	......
Caustic Magnesia	1.25	1.07	1.89	0.44	2.90	6.13	2.79
Alkalies and loss,	2.94	5·75	5.05	4.20	0·72	4.01	3.77
	100.00	100.00	100.00	100.00	100.00	100.00	100.00

The above figures represent the number of pounds in a hundred, the per centage. Thus, in No. 1 there are 60 13.100 lbs. of silica, 12 77.100 lbs. carbonate of lime, &c.

On one point I have not yet satisfied myself. I think that some of the lime dissolved by muriatic acid, was in the state of soluble silicate rather than carbonate, that is, in combination with silica in place of carbonic acid. This, if true, is important, and I am about to determine the fact, but shall not be able to give the result in this letter.

It must be obvious, even to a person unacquainted with the nature of the substances above named, that soils formed by the decomposition of these slates must differ greatly in their composition; but to one who knows their properties it is no less evident that they must differ in their agricultural capabilities also.

We will first notice the important ingredient of lime. All of that represented as carbonate, is in a state to be directly available for the food of plants. The caustic or quick lime, being in the insoluble part, would be more tardy in its operation. It is not to be despised however, for its action, though slow, is sure. We see as to the carbonate, that while No. 1 has 12.77 lbs. in a hundred, Nos. 2, 4, 5, and 7 have only from 3 to 4 tenths of a pound, and No. 6 has none, or merely a trace.

The differences in the quantities of magnesia are also striking, and it is not unworthy of notice that there is generally more of it in the insoluble portion, represented as caustic magnesia, than in the state of carbonate in the acid solution. This being a necessary ingredient in a fertile soil; its presence is favorable, though in excess it is found injurious. In No. 6 there is perhaps too much of it, especially when we consider the small quantity of lime.

The alkalies are also, as they should be, in considerable quantity, except in No. 5. The quantity of iron and alumina soluble in muriatic acid is as high as 12 per ct. in No. 6, and as a portion of the iron is in the state of protoxide, and soluble therefore in water, it might under certain circumstances accumulate in the subsoil to a hurtful extent.

The proportion of these substances being so different, we see proved the importance of chemical investigations. The above slates were taken from separate strata, all of which would probably be embraced within a circle of 20 miles, and the soil produced by each would need a peculiar treatment. How absurd would be an attempt to cultivate all upon the same system, and yet such attempts are not unfrequent. It is in such districts as the one now under consideration, that we find contradictory accounts respecting the benefit resulting from the application of certain manures. For instance, a farmer upon the soil of No. 1 finds that the application of lime produces no good effect, while his immediate neighbor, upon another strata, such as No. 6, may say that lime is quite invaluable, that it doubles his crops. One therefore, is an advocate for lime as an universal remedy; the other says that it is of no use whatever. Both are right as to their own cases, but are wrong in making a rule from one isolated instance, or even the experience of a limited district.

Lime would no doubt be effective added to the soils of all the slates except Nos. 1 and 3, while sulphuric acid and bones would greatly benefit the whole of them, as supplying in addition to lime, sulphuric and phosphoric acids, in both of which substances they are either deficient or contain them in very small quantities. My remarks might be extended to a very great length, and might embrace many points necessarily omitted, but I will not trespass too much upon your columns.

JOHN P. NORTON.

ROTATION OF CROPS IN SCOTLAND.

Featherhall, Midlothian, 30th May, 1845.

To the Editor of the Albany Cultivator.

SIR—In my last I pointed out to you that the characteristics of a philosophical course of rotation of crops, are, placing plants requiring the same substances for their development, as far from each other in the course as possible; and the affording facilities for the disintegration of the soil, and for destroying and preventing the growth of weeds. I shall now draw your attention to the principal rotations practiced in the Lothians, and examine them by the standard above laid down; but before doing so, it will be necessary to inquire, what are the substances of which the different crops are composed?

At the risk of repeating what may already have appeared in your journal, I transcribe the results of some of Sprengel's analytical researches into the constitution of vegetable bodies, and I also add a table prepared by myself, showing the qiantities of inorganic substances per Scots acre, carried off, by a good crop, such as is usually raised in my own district, (a fertile one.)

TABLE showing the quantity of inorganic substances contained in 1000 *lbs. of each of the different productions named with the exception of the Turneps and Potatoes, which show the quantities in* 10,000 *lbs.*

	WHEAT.		BARLEY.		OATS.		BEANS.		VETCH		RYE GRASS	RED CLOVER.	WHITE CLOV'R.	TURNEPS		POTATOES.	
	Grain.	Straw.	Grain.	Straw.	Grain.	Straw.	Grain.	Straw.	Grain	Straw				Roots.	Leaves	Roots.	Leaves.
Potash,	2.25	0.20	2.78	1.80	1.50	8.70	4·15	16·56	8·97	18·10	8·81	19.95	31.05	23.86	32.3	40.28	81.9
Soda,	2.40	0.29	2.90	0.48	0 32	0·02	8·16	0·50	6·22	0·52	3·94	5.29	5.79	10.48	22.2	23.34	0.9
Lime,	0.96	2.40	1.06	5.54	0.86	1.52	1·65	6·24	1·60	19·55	7·34	27.80	23.48	7.52	62.0	3.31	129.7
Magnesia,	0.90	0.32	1.80	0.76	0.67	0.22	1·58	2·09	1·42	3·24	0·90	3.33	3.05	2.54	5.9	3.24	17.0
Alumina,	0.26	0.90	0.25	1.46	0.14	0.06	0·34	0·10	0.22	0·15	0·31	0.14	1.90	5.36	0.3	0.50	0 4
Oxide of Iron,	trace	.....	trace	0.14	0.40	0.02	....	0·07	0·09	0·09	......	......	0.63	0.32	1.7	0.32	0.2
" of Manganese,	.....	.....	.....	0.20	.....	0.02	....	0·05	0·05	0·08	......	......	......	......	......	......	......
Silica,	4.00	28.70	11.82	38.56	19.76	45.88	1·26	2·26	2·00	4·42	27·72	3.61	14.73	3.88	0.84	0.84	49·4
Sulphuric acid,	0.50	0.37	0.59	1.18	0.35	0.79	0·89	0·34	0 50	1·22	3·53	4.47	3.58	8.01	5.40	5.40	4.2
Phosphoric acid,	0.40	1.70	2.10	1.60	0.70	0.12	2·92	2·26	1·40	2,80	0·25	6.57	5.05	3.67	4.01	4.01	19.7
Chlorine,	0.10	0.30	0.19	0.70	0.10	0.05	0·80	0·80	0·43	0·84	0·06	3.62	2.11	2.39	1.60	1.60	5.0

TABLE showing the quantities of inorganic substances per Scots acre, carried off by the following crops in pounds.

	Potatoes	Wheat.	Turneps	Barley.	Hay.	Oats.	Beans.
Potash,	121.23	6.32	199.35	13.74	85.11	43·65	69.38
Soda,	52.81	7.01	95.36	10·14	28·98	4.05	22.15
Lime,	56.05	3.80	114.64	19.80	98.86	9.42	25.96
Magnesia,	13.19	3.37	23.68	7.62	11.92	3.00	11.26
Alumina,	1.27	3.80	2.82	5.13	1.59	0.69	1.20
Oxide of Iron.	0.79		3.94	0.42		1.29	0.24
Do. Manganese,				0.60		0.09	0.17
Silica,	20.40	110.45	39.96	157.14	119.90	265·74	10.85
Sulphuric acid,	13.71	2.54	81.27	5.31	25.29	4.60	3.41
Phosphoric acid,	16.40	6.95	35.49	11.10	17.42	2.64	15.21
Chlorine.	5.46	1.30	25.43	2·67	9·29	0.52	3·82

I shall first then notice a rotation which prevailed over a great extent of country, but which for reasons I shall afterwards explain, is now much restricted. I refer to what is called the four course shift; it consists of, 1st year, naked fallow, beans, or (near large towns) potatoes, to all of which a liberal supply of manure is given; 2d year, wheat; 3d year, grass for hay or pasture; 4th year, oats. In a pastoral district or one where a light soil prevails, this course is modified thus: 1st, turneps manured; 2d, wheat or barley; 3d, grass for hay or pasture; 4th, grass, pastured; 5th, oats. By referring to the 2d table you will find that this rotation may be called a correct one, as you will observe that the beans, potatoes, and turneps, take large quantities of substances which the wheat and barley use sparingly, but upon which the succeeding hay crop makes large demand, this again followed by oats, requiring a limited supply. It has been found however, that in this course, it is often difficult to secure a plant of clover, (a matter of the first importance, owing to the land becoming what is technically termed "cloversick," a circumstance which, notwithstanding the strong light of science now shed upon agriculture, is still unexplained; this has given rise to a more extended rotation, in which grass recurs after longer intervals, and is generally found to have the desired effect.

In the best cultivated districts of Mid Lothian, the extended course I have just adverted to, consists of 1st year, potatoes manured; 2d, wheat: 3d, turneps manured; 4th, barley or oats; 5th, hay; 6th, oats. In East Lothian, where, owing to the distance from any large town, potatoes are little cultivated, this course consists of first year, naked fallow manured, 2d, wheat, 3d grass, 4th oats, 5th beans manured, 6th wheat; on light descriptions of land the fallow is sometimes displaced by turneps.

In the fertile district around Dunbar, the soil of which consists of a rich loam, a peculiar rotation prevails, which has been termed the "Dunbar system." It consists of, 1st year, turneps manured, and consumed by sheep on the ground; 2d, wheat: 3d, grass (pasture;) 4th, wheat or oats; 5th, beans manured; 6th, wheat. The most remarkable feature in this course, is the raising of wheat every second year, the crops of which are most luxuriant. On referring to the table, it will be found, and the fact is a very curious one, that wheat contains a smaller quantity of inorganic substances per acre, than any other of the ordinary plants of agriculture; we must not however, forget that it is rich in nitrogen, and we find that it requires a great supply of azotised manures, and accordingly that the treatment of the land in this district is of the most liberal character. On examination of the three last mentioned courses, you will observe that they possess all the characteristics of a judicious rotation in a very high degree; with the exception of the last, they introduce a large number of plants into the course, thus preventing their repetition, except at long intervals; they also afford two opportunities in six years, of deepening and minutely pulverizing the soil, and extirpating weeds during the cultivation of what have been termed fallow crops, which are always grown in rows, with intervals varying from 26 to 30 inches, in which the horse and hand hoe are kept constantly at work until the foliage of the plants prevents their further employment.

I have now laid before you a short account of the rotations generally practiced in our best cultivated districts; on no farm however, are they adhered to without some slight deviations, as circumstances sometimes occur rendering departure from the particular course generally adopted, judicious or indispensible, as for instance when grass seeds fail, &c.; the rotation is the rule however.

In concluding this paper, it is with pleasure that I advert to the interesting fact, that here we find the revelations of science illustrating and explaining the maxims of a lengthened and wide spread experience, thus showing us the value of those researches, which some have been but too much disposed to decry, and bidding us hope the noontide of that day is not far distant, the morning of which has already dawned, when scientific knowledge, based upon carefully conducted experiment, will replace that knowledge which has only been obtained by the gropings in the dark of generations, and by a painful and dear-bought experience.

In my next I will proceed to give you a detail of the methods pursued in the cultivation of the different crops, beginning with the fallow ones. JNO. GIRDWOOD.

LETTERS FROM MR. HORSFORD—No. VI.

MR. TUCKER—The annexed diagrams will enable your readers to form a tolerably correct idea of the plow generally used in the vicinity of Giessen. Fig. 75 represents the various parts in connection. Fig. 76, the part corresponding with the mouldboard. Fig. 77, the share of the plow, from above. A crotch, of natural growth, furnishes the handles and uprights for the reception and support of the beam—a round pole of the usual diameter. These are connected with an imperfectly squared block at the bottom, which occupies the place of the landside, and is plated on the sides and below with iron. The cutter fits loosely a mortice in the beam; and immediately below, or perhaps more generally a little behind, the share. Fig. 77 is bound to the landside. Those portions included within the dotted lines of Fig. 77, are wrapped around the termination of the block. A frame work of eight or ten inches square, supported by the wheels, gives free play to the beam, and permits elevation or depression by means of little blocks, regulating thereby the depth of the furrow. The whiffletrees are fastened to a short tongue, which passing through the axle is attached to a chain, extending to the middle of the beam, and there secured by a clevis.

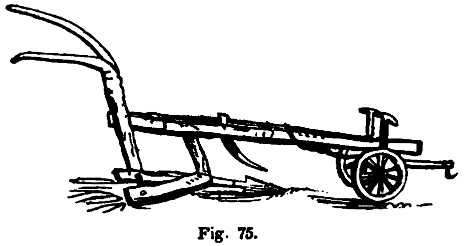

Fig. 75.

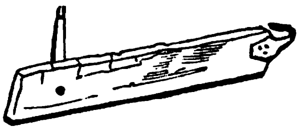

Fig. 76.

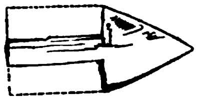

Fig. 77.

It will be seen that thus far, the plow is as well adapted to turn furrows to the right as to the left. The addition of the mould-board, Fig. 76, determines the direction. This is changed in plowing, from one side to the other, so as to turn all the furrows the same way. I have seen this plow in use with one horse, with two horses, one ox, and with two cows, though not yet with two oxen, though I presume it is in difficult plowing.

In Baden, near the Heidelberg, another kind of plow is employed. The annexed diagram, (fig. 78,) was sketched from the best one that I saw. In place of the shoe near the end of the beam, to regulate the depth of the furrow, many were furnished with pairs of wheels. The mould-board consists of a single sheet of iron plate about the eighth of an inch thick, to which the requisite form is given in a kind of press.

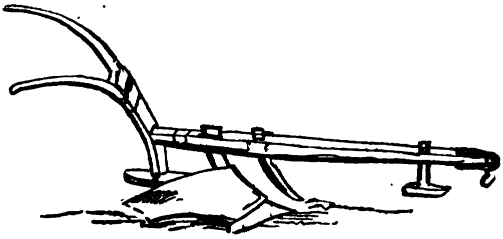

Fig. 78.

Other plows, consisting of modifications of this and that of Fig. 75, are, as I am informed, in use both in the vicinity of Heidelberg and in other parts of Baden.

The harrows that I have seen, are simply the quadrangular frame much in use upon farms in New-York, except that they are generally very much lighter. A convenient mode of transporting the plow and harrow has, for the last four weeks, been illustrated each morning, as the peasants go from the town to their fields in the adjacent country. The plow turned down upon the side, is supported by a crotch, the two prongs of which trail at some distance behind upon the ground. Upon the plow the harrow rests securely. This troop of peasants going from the cities and villages every morning, and returning at evening, is unlike any thing the new world affords, or ever will. There can be no desire that it should, for in the course of a year, an immense sacrifice of time, through this feudal inheritance of residing in hamlets and towns, must be inevitable.

That improvement in agricultural implements should be slow in Hessia and Baden is not difficult to explain. Modes and practices that have received the sanction of centuries, and are positively known to be connected with certain invariable results, will naturally be more warmly confided in by a peasant of moderate means, than new and untried schemes, though they may furnish much larger returns. With the burthen of taxes, which I was told amounts in this rich Duchy of Baden, to about one tenth of the income of the agriculturists, the peasant with his whole family must work most industriously, and live most economically, if he would be prepared for advanced age or illness; and above all if he would make the condition of his sons, at their entrance upon active life, better than that of their fathers had been. I am inclined to give this explanation to the want of enterprise in general, and of course to the hesitation in the adoption of improvements.

In a conversation with the Director of Agriculture, connected with the University of Heidelberg, I mentioned the extensive use of threshing machines in the United States, and inquired if they might not profitably be introduced here. He thought not, and gave the condition of the peasantry, their moderate means, and generally small fields of grain, as reasons. I remarked that more recently, few individual farmers, comparatively, owned machines, but that most of the wheat in particular sections was threshed by movable machines, to which a portion of the horse-power and most of the men were supplied by the owner of the wheat. This gave him a new view of the matter; stillhe seemed to think it would be difficult for a manufacturer to find purchasers. And the gentlemen to whom I mentioned the subject and of whom I made the same inquiry, remarked that without threshing with the flail the peasants would have nothing all winter to do.

I commenced this letter more than a fortnight since, and in the interval, the gardens, fields, and woods have assumed a new dress, as beautiful here as I have ever seen it any where, and the more grateful that the winter has been so prolonged. In November, the hedges, fruit, shade, and forest trees, all seemed to me dwarfish, and altogether of indifferent development. But now they have been through the hands of the *Forest master*, and display a neatness and prettiness of appearance that enables them to approximate their *natural* brethren of America. Apple trees have been engrafted anew, bowers and ornamental shrubs trimmed and trained, and these with the groves in bloom and leaf, make Giessen, to one at all disposed to a generous consideration of good qualities in objects about, a very pleasant place of residence. One feature of the landscapes in the vicinity, at first impressed me unpleasantly. It was the abrupt cutting at a height of from twenty to forty feet, and close trimmings of the trees along walks, and particularly throughout the valley of the Lahn and its tributaries. I was none the less gratified that no object seemed apparent in what seems to me, this strange taste of the Germans. At length, a pupil of the Forest Instruction Department of the University, explained it fully. The close trimming in the spring supplies from the willows, the basket manufacturers;—of the larger and harder woods, materials for controlling the channels of the streams, by filling up the elbows, of making partial dams, and a variety of other uses; and the trunks becoming exceedingly hard from the abundance of knots and curvatures in the grains, furnish a valuable kind of timber

In walks about town and in the adjacent country, numerous mills are met with, all upon the same plan, for grinding wheat, rye, &c. They are scarcely more complicated than the pestle and mortars of the ancients—comparatively speaking. A building in Marburg, about seventy feet long and one story high, contains seven of the entire suites of apparatus. Each stone has its separate wheel, and is of about two thirds the diameter of those used in Rochester, and in the northern states generally. The bolt is a little trough, about four feet long, six inches wide, and three deep, with a linen sieve across the bottom. It is subjected to a lengthwise, vibratory motion, and is inclined so as to conduct the pulverized grain pretty rapidly from one extreme to the other. This and the whole hopper, stone and all, occupy scarcely more than twelve feet cube. The best flour is ground three or four times; of this the white bread is made in little biscuits, while the loaves in use as the staple by every body, are dark brown and contain rye.

Compare this with the sources of bread in the Genesee valley! Here with one stone, a man may grind, perhaps, ten bushels in a day—and with fifty stones, a corresponding proportion would be ground. I remember having read that in the season of 1841, something like 2500 barrels, daily, were ground and packed in the city of Rochester alone. The statement of this index of the perfection of our machinery for flour making, does not fail to bring an exclamation in Giessen.

The lectures are all in progress. Liebig's course is attended by more than a hundred students—some of whom, however, are members of the medical class. You have doubtless already learned that he is applying science to the manufacture of manures for England. I send you herewith, a letter published not long since in England, and of which, as there is a copy right reserved, you may not receive another copy. If you can find room for it in the Cultivator, I wish it might have a place for your readers. It certainly presents in the clearest light—in the most comprehensible and convincing form, the advantage which will result from the application of science to agriculture.

Truly yours, E. N. Horsford.

MR. MITCHELL'S LETTERS—No. VIII.

The Moorlands of Scotland—Their Cultivation and Products.

Inverness, North of Scotland, June 16, 1845.

Luther Tucker, Esq.—My last contained notes through the bog districts of Ireland ; the present dates from the capital of a still wilder country. Nothing can exceed the sterility and impracticable nature of much of the Scotch moorland. The soil is meagre, rests upon beds of coarse gravel, and is covered with heather, affording nourishment to a few sheep and black cattle, not much larger than the sheep of England, and to the multitudes of grouse which draw southern shooters by thousands in the months of August and September. These moors are measured, not by acres but miles, and lie variously from 1,000 to 4,000 feet above the sea. Habitations are seen only at great intervals of distance, and consist either of a shooting lodge, keeper's cottage, or shepherd's hut. The roads are few, and except in the shooting season, commencing with the 12th of August, are travelled only by the mail coaches.

I speak now more particularly of the great inland districts both north and south of the Caledonian canal. Agricultural resources are necessarily exceedingly limited. The annual rental value of the moorlands proper for grazing, would not exceed two cents an acre. The shooting privileges and trout and salmon fishing in the streams that are scattered over them, would add perhaps eight or ten cents to the yearly value; depending, however, much upon the strictness of preservation and convenience of access. It is not uncommon to pay some $2,000 to $3,000 for the privilege of shooting over a moor a single season. Estates are of enormous extent. Two days since I rode for upwards of fifty miles through the Athol property alone. Timber is chiefly pine and larch—only to be met with in plantations, or occasionally remnants of native growth, scattered through the glens and upon the sides of the mountains. Nor do the plantations make an inconsiderable figure in the landscape of this wilderness, since the number of larches planted by the late Duke of Athol exceeded twenty-seven millions. Birch grows extensively in the valleys, but reaches a size only sufficient for fencing and fuel. Thirty to forty miles of distance may nevertheless be gone over in the moor districts without sight of a tree.

Grazing prevails to such an extent in the Highlands as to deprive the majority of the population of any steady employment, and extreme poverty is the natural consequence. The huts of the poorer classes are even more wretched than any I met with in Ireland. The walls are of stone and mud, the roof of turf, and the floor the bare ground; sometimes a rude chimney is constructed, but oftener the smoke is allowed to escape at the door. Their food, oat meal and potatoes. They manage to put in a small patch of oats about their cottages, which the younger children watch against the depredations of the roving cattle; and in the valleys the farmers allow those who please to plant with potatoes as much land as they will supply with manure. Oats and potatoes, with some wheat, are principally grown in the better agricultural districts of the north. The chief agricultural exports are sheep, wool and black cattle. The sheep are mostly the black faced, of very smal size, and light and coarse fleeces. They are extremely hardy, and as nimble as goats; the mutton is not fat, but very sweet; and it commands an extra price in the London market. This breed of sheep is frequently crossed in the more fertile districts with the Cheviot sheep of the south, and in some the Cheviots are wholly preserved, or crossed with still larger sheep of England—the finer wool and larger carcases of the latter ensuring larger profits. An annual fair is held in Inverness in July, at which it is estimated 800,000 pounds of wool, and 100,000 sheep change owners. The black cattle are small, but the beef is highly esteemed for its delicate flavor, and maintains a good price even when it comes in competition with the famous breeds of the south.

Such dairies as are to be found, favor the Ayrshire blood. The butter is good—worked wholly with beach paddles, and neatly turned into forms of acorns and strawberries for the table. Much poor cheese is made in parts of the Highlands, which would not do discredit to some of our white cheese makers at home, but the best is either from England or Ayrshire.

The implements of agriculture are not of so improved a character as in the south. Neither draining or drilling is general. The crops are not clean, and from the window where I sit, I can distinguish the oat fields over some miles of territory by the yellow blossoms of the mustard.

Great numbers of Highland ponies are annually sent to England. They are very hardy and strong, and are sold from £3 to £6 a head. Guano is used extensively near the seaport towns, and sea manure along the coasts. Hedges are not numerous, nor are divisions of any kind, herds of cattle being generally attended, even in the immediate neighborhood, by a watcher. Farmers are just now busy with the sowing of turneps, and the cleaning and earthing of their potatoe crop. These crops are both planted in drills. The potatoes are put three or four inches apart, directly upon the manure, and covered with the plow—afterward rolled. When an inch out of ground the crop is thoroughly hoed by hand; it is next gone through with a scarifier, which thoroughly loosens the soil between the rows; this is followed by the plow throwing a furrow against the potatoes from either side. One thing is highly noticeable, both of this and of every drilled crop I have yet seen in Great Britain—this is the extreme regularity and evenness of the rows. A furrow of a hundred rods in length will not vary a foot from a straight line. This is effected not by measuring and timing, but simply by the expertness of the plowman and the perfect training of the horses. It is unnecessary to say how much this adds to the appearance, as well as to the facility with which a crop is cultivated and harvested.

Here, as in every part of Scotland I have visited, the native gardeners maintain their celebrity; vegetables being abundant and good. Farm cottages of the better class are built of stone, and the roofs slated. Heath is used for thatch, as also turfs cut into scollops. The season had been up to the 10th instant exceedingly cold. The weather has now changed to the warmth of midsummer and vegetation is most rapid. The oat and wheat crop are not, however, more forward than usually at this season in New England; the grass is, I fancy, in advance of yours. Soiling is praticed to a considerable extent on some farms in the neighborhood of the towns, and fresh cut grass is extensively fed, with oats, to working horses. Clover and the Italian rye are the prevailing grasses cultivated.

Honey is abundant in the Highlands—made from the blossom of the heather; it is not agreeable to my taste, however its mildness may suit others. The hive is after the oldest fashion, and most rural, being formed by a coil of twisted straw.

The clothing of the farm laborers is home-made, mostly a blue mixture; and in nearly every cottage you can hear the sound of the loom.

The observations above apply exclusively to the northern districts of Scotland; those of the south being of as different character as possible; and offering the finest examples of British husbandry which has yet fallen under my notice. They will be the subject of some future communication.

You will notice with some interest reports of the recent debate in parliament upon the subject of the corn laws; offering additional ground to suppose that the free importation of grain will be the ultimate and not very distant result of the increasing agitation of the subject.

Truly yours, D. G. Mitchell.

Domestic Correspondence.

CANADA THISTLES.

I was glad to see in a late number of the Cultivator the remarks on this weed; and more particularly the caution against its introduction into places where it is now unknown; as in this case an ounce of prevention is worth some forty or fifty tons of cure, at least. But that the inexperienced may know something more of the evil they should shun, I wish here to repeat in substance a statement I have seen somewhere of the loss occasioned by a small patch of Canada thistles, which is perhaps about right for such as are *small*—large ones needing a different estimate, especially such an one as I once saw, which *covered an entire large farm*, having spread to this extent during a few years neglect.

Loss from a Small Patch.

Loss in lot No. 1, wheat smothered by their growth, ...	$12 00
" " No. 2, wheat checked in growth, and injured in quality by green thistles bound up with it, ...	10 00
" by having ten hands hindered an hour each day, for five days, picking thistles from their fingers, ...	4 00
" by a load of wheat upset before a long shower, by being badly built, the loader being afraid to touch the sheaves, ...	3 00
" by tearing leather strap and breaking three cogs from horse power threshing machine, in attempting to force a large bundle of tough thistles, unbound, through the machine, ...	5 00
" of time to 11 hands, and by collecting them again, three days after the above accident, when the machine was mended, ...	3 00
Total, ...	$37 00

The profits of a farm covered with such patches, intermixed with corn, oats, barley, grass, &c., may be reckoned the same way.

A city may be most *easily* preserved from conflagration by allowing no fire to spread; by extinguishing instantly all that appears. The same principle applies to the spread of Canada thistles. A miller refused to employ a skilful embanker to close a muskrat hole in his dam because he asked a dollar—a sum he would gladly have paid the next day, when the hole had washed larger, but not three dollars, the amount then charged; but the third day he was *compelled* to pay fifty dollars, as the torrent was fast sweeping away his dam. The spread of Canada thistles *must* be stopped, if we continue farming; why not do it then when it may be *easily* done?

I have had some experience in destroying them, and more observation; and I know of no way which will at all compare with thorough and repeated plowing.

The first plowing must be left till about the time that the thistles appear in flower, or when they have become considerably exhausted by growth, when they must be *well* and *deeply* turned under, mowing the thistles previously if necessary to the success of the work. Then they must be again turned under at least once a month till mid-autumn, or thereabouts, when, if the work has been WELL DONE, *the patch will be killed forever*, or till the ground is again seeded with thistles from elsewhere. Wheat may be sown on the ground the same autumn. A statement of a few experiments may place this in a clearer light:

Daniel Wilson, of Covington, Genesee county, N. Y., had a patch of Canada thistles so dense that the roots formed a complete mat. "He plowed the ground at regular intervals of four weeks for four successive times, when after the fourth plowing there was not a thistle to be seen, and the ground was in fine tilth for sowing wheat, loose and nice enough for any garden vegetables; and now, July, 1833, there is a most luxuriant crop of wheat on the old thistle bed, and *not a solitary thistle has been found*, although it has been carefully examined by those interested in testing its efficacy."

"I commenced about the first of June," said the late V. Yeomans, of Walworth, Wayne county, N. Y., "and plowed them about once a month, and harrowed them as often, till about the first of October. The result is, *their entire destruction*, except a few places where the plowing could not be well done."

Augustus D. Ayers, of Romulus, Seneca county, N. Y., says, "The field contained six acres, principally occupied with Canada thistles, on which a Florida war had been waged for twenty-five years or more, with little prospect of success or termination. In the latter part of May I broke it up, plowed the ground deep four times, and harrowed it in the heat of summer. The result was, it *killed the Canada thistles*, and my ground is in good condition for after cropping."

An experiment of this kind I also tried myself on about four acres of Canada thistles, by causing the ground to be plowed thoroughly four times during the season. The occupant, who bought the land that year, informed me that none appeared the following season.

The importance of doing the work well, and of cutting off and deeply burying every plant, must be obvious; and the superiority of throwing them so far under the surface as to require a month for them to creep out, over a mere skimming of the surface with the hoe, or cutting them off above the surface with the scythe, must be also evident. A correspondent of the Genesee Farmer (vol. 4, p. 324,) killed a patch by hoeing them to the surface *twice a week;* but he worked from spring till nearly the first of eighth month (Aug.) before each successive three days' crop began to diminish; after which, by closely following their retreat, they rapidly disappeared. But they had a much better chance to *breathe* in this case, being a part of the time above ground, than when kept wholly under by a deep plowing as soon as they made their appearance above the surface. Such treatment would prevent the necessity of taking up and *burning* "every plant and vestige of the root," as Dr. Smith recommends in the article above alluded to, which in large patches, where the roots often run several feet below the surface, would be wholly impracticable; or of pulling up every shoot as soon as it appears, "*for seven or eight successive years,*" as Loudon recommended,—the phrase "as soon as it appears," meaning probably from one week to one month, or more; for it is impossible for *any* plant to live *wholly* beneath the surface for half that term of years. J. J. T.

DISEASE OF THE POTATOE.

Mr. Tucker—The subject of the disease which last year prevailed so universally among potatoes, is one which has very naturally and properly called out the the inquiries and conjectures of many investigators, and as yet no particular cause for its existence seems to have been concluded upon by the mass of cultivators. Some suppose that the membranes of the leaf are destroyed by an insect, and that the work of decay originates in this cause.

But of this theory for it is theory and nothing more, we are prepared to say, that we saw, (and so did every observing farmer, we must think,) hosts of small, black flies infesting potatoe fields, in years long before we ever heard of the disease in potatoes, and the usual consequence was, that the membrane of the leaf was eaten out, as somebody, in some particular instance, saw it last fall. Then, again, in proof of the innocence of the poor insect, (who is certainly driven to rather hard fare, even for a mischievous fellow,) in this matter, we must say that we saw with our own eyes, and no mistake about it, leaves of potatoes after they had become dry by the disease, as perfect in all their parts as any potatoe leaves we ever saw. Others are of opinion that the cause of the disease is owing to the "influence of a worm in the root," but we have seen no statement of such animals being found in such locations until the disease had made some progress, so there must be some doubt in the case as to whether the worm does the mischief, or is attracted by the consequences of its having been done to feast on the corruption that ensues.

Last fall, we ventured an opinion on the cause of the disease which as yet we have found no cause to relinqnish, but on the contrary, from the facts we have collected and observations we have made, we have become more tenacious of its correctness. It was simply this, that from some cause which we did not then and cannot now define to our own satisfaction, the potatoe vine was attacked with a rust similar to that we frequently see on the straw of rye and wheat. That in the case of the potatoe, it first showed itself in a very small blotch on the side of the stalk, which continued to spread until it had gone round and through the stalk, when the latter, at the particular point of disease became dry and hard as though it had reached its maturity. The death of the top of the stalk of course soon follows, but the lower part remains green for a while. The conjecture, (it was mere conjecture) we threw out, was this, whether the sap which was now stopped by the dryness of the stalk in its usual channel of circulation, and, of course, prevented from passing into the leaf, its natural laboratory for preparation to return to the tuber and fulfil its accustomed service in giving it nourishment, did not necessarily return prematurely, and either from excess of quantity, or by bringing back some quality which had better been given to the winds, induce the disease in the tubers? Our own potatoes were too far gone to experiment much upon, when we, surprised with the novelty of the action, hit upon a single plan to adopt. It appeared to us however, as soon as we saw *how* the mischief was progressing, that mowing the tops was the best and perhaps only efficient method to pursue. A neighbor, whose crop was smitten long after our own, tried this experiment, by mowing about half a field, as soon as the tops exhibited symptoms of the disorder, and the result was satisfactory and cheering. Where the tops were so mown, no appearance of the rot was ever discovered, and the potatoes gave all the evidence of maturity which the circumstances of the case could possibly admit of, while the other part of the field suffered as much from the rot as any in the vicinity. Here, then, is one instance in favor of our theory.

Other experiments were tried, of which we shall cite but one or two. In one case, a farmer dug a very few hills when the vines first showed symptoms of disease, and carefully buried them and let them remain until the usual time of digging, when they were taken out all sound, while the most of his crop had suffered essentially. There can be no doubt we think, that when potatoes are dug so early as the rot came last year, but that they must be put in small bodies and kept cool and excluded from the atmosphere. Their tendency to heat, and thus become heavy and insipid, warrants us in that conclusion, and so we infer that the letting them remain in hills with the tops taken off, until the usual time of digging is a much cheaper and better way than to dig and put cellars, or on floors in piles.

Another course of proceeding which has come under our observation, was adopted by some Irishmen, who had known this enemy to their favorite esculent "in the old country," and which it may not be useless to mention. When they saw the crop smitten, they dug it immediately, and piled the potatoes on the surface of the ground, taking care to guard them from sunshine until the job was completed, when they covered the pile entirely with clay. The result was probably as they had known it to be aforetime. Their crop was saved and their potatoes of *good* quality. The clay, undoubtedly acted as a two fold agent, kept them cool and excluded the atmosphere and storms.

We have only to say, in conclusion, that if any one can confute any point we have advanced, we shall be happy to have them do it. Truth and light are what we are looking after in this matter, and if we have advanced an error, the public good requires that it should be set right. And especially does the agricultural interest of our country require that this pestilence which made such rapid strides in its advancement the last year, should meet with hot pursuit by every philanthropist, until its progress is stayed if not effectually stopped.

Yours truly, W. Bacon.

P. S. There have been many experiments in planting potatoes tried in this region, this spring, with reference to preventing the disease. If any thing of importance results from them, I shall give due notice.

Mount Osceola, Mass., June 22th, '45.

THE SUGAR CANE.

L. Tucker, Esq.—In case you do not possess a better treatise on the subject of sugar cane, you are at liberty to use this as it may interest Mr. McDonald, noticed in the May number of the Cultivator, page 151.

Sugar cane designed for the plants are cut before frost; usually early in Oct., and either planted immediately or put down in matelas or beds from one to two feet thick, like shingling, with the tops uppermost in order to protect the stalks and eyes from freezing. Cane may be planted in the autumn or any time between September and March. The usual time is after rolling, or sugar making, in January and February. When planted the leaves are taken off.

The ground is well plowed, and if rough, well harrowed; after which, it is laid off in furrrows with a plow, from four to six feet apart, as scarcely any two plants are alike and the cane is laid lengthwise in the furrows. A single stalk is by some deemed sufficient. I would prefer it double, with all the eyes sound. Long cane is better cut in two or three pieces. It is then covered with the hoe or plow from one to three inches in depth. Light covering would be preferable were there no danger from freezing.

After the winter is passed the cane is bared on each side with a plow, throwing the furrow from the cane; and the cane is now scraped with the hoe; taking all the surplus earth from over the cane—leaving the cane near the surface, in order to promote early vegetation.

It is now kept clean from grass and weeds until it has suckered or stooled sufficiently thick to produce a full stand; soon after this, say last of May or in June, it should be hilled from three to four inches and laid by and unmolested till ready to harvest or cut for the mill.

Allow me here to say, the ground, when planted, should be so thoroughly ditched and cross furrowed, as not to allow any water to stand on the surface of the field or ground. Three cart loads of cane may plant an acre single, but we are not governed by loads. Cane ripens or matures usually from three to six or sometimes or seven feet high, commencing from the bottom, say in August or September, and ripens about a joint or six inches a week till injured by a freeze. The frost does not injure it.

It is first cut or topped as high as the leaves are dry; say under the green leaf, and the top is thrown upon the ground as useless, or is often winrowed or put up for plants where plants are scarce. The leaves are stripped from the cane already topped, and the cane is then cut with a cane knife close to the ground, put in carts and carried to the mills. The cane is then usually placed upon a carrier, made of two endless chains, connected to each other by wooden slats, forming a band of from two to four feet in width, forming an inclined plane; carrying the cane up to the mill, and dropping it in the hopper, just as fast as the mill, which is somewhat similar to a rolling mill, rolls the cane, and thereby expresses the juice, which runs into receivers; and the sooner it is put in the kettles, boiled, skimmed, and concentrated to syrup or the striking point, the better.

As it is presumed no one will undertake to make cane sugar without first seeing the operation or procuring the assistance of one who is experienced, I deem any further information unnecessary.

In conclusion, permit me to say, scarcely any two think alike on the subject.

Respectfully yours, S. TILLOTSON.

New River, La., May 23, 1845.

NOTES OF TRAVEL IN THE SOUTHWEST—No. V.

BY SOLON ROBINSON.

On the 4th Feb. Mr. R. crossed the Misssissippi, at the "Iron Banks," marked on the maps as Columbus, Kentucky, built between the river and a hill some 200 feet high, composed of clay, lead and iron stone, and up which the road leads to an entire change of soil and description of country from that on the opposite side of the river. Here the face of the country is quite broken; soil rich clay; timber, beach, sugar, poplar, oaks, hickory, dog-wood, &c.—all of which indicate a good strong soil, *and good* grass land; yet it is not here, notwithstanding this is the blue grass state.

But here is not to be found the same kind of population that is to be found in the blue grass and stock raising part of Ky. The crops here are corn enough to eat and feed through the winter, and tobacco enough to sell to buy the few necessaries required. The farms are small and houses generally poor, and here as in Missouri, always something out of order—stables without doors—farms without gates—and whole neighborhoods without a good head of cattle, horses, hogs or sheep. There is in this part of Ky., an abundance of most excellent land, tolerably heavy timbered, that can be had for about $2 an acre, out of which excellent farms could be made.

On the 5th, Mr. R. passed into Tennessee—the land similar to that described yesterday. The best buildings are the towering tobacco houses, in which the crop is hung up, as soon as it is cut and wilted, where it hangs to dry, and is then "fired."

The great pest in the cultivation of this crop, are the worms that prey upon the leaves, and unless destroyed, will destroy the crop. The eggs are deposited by a miller almost as large as the humming bird, and very much resembling it in movements, upon the upper and under side of the tobacco leaves, from the time it is about half grown till it matures. These hatch and grow "powerful quick," and eat "powerfully," and have all to be picked off by hand; though some have trained turkeys to perform a part of the work. In cutting up the crop, the laborer seizes the stalk with one hand, and splits the stalk nearly to the ground with a stout butcher knife, then cuts it off and throws it in piles to wilt, which it will do in a few hours, when it is hauled to the house and hung across sticks in the upper tier and so down till the beams are full; when it is sufficiently dry, large fires are built on the ground so as to give as much heat as possible with little blaze or smoke. This is a dangerous operation and accidents often happen. After it is thus cured, it hangs till a wet spell moistens it so that it can be handled to strip, or if the room is wanted, it is taken down and bulked away to make room for the next cutting. The crop avarages about 800 lbs. to the acre, worth 2¼ to 3c., and 2 to 3 acres to a hand. As a matter of course when tobacco is the general crop, the land is rich; yet generally speaking the people do not appear so in this part of the country.

Although here is nothing but corn and fodder, yet stock looks better than in Missouri. Pretty good oxen with miserable yokes and bows, are worked upon more miserable carts. In fact all the farming implements are of the roughest kind—even brooms, that indispensible article with a yankee housekeeper, are not to be found, unless you are pleased to denominate that miserable little switch of broom straw with which you see a negro poking about the floor as though looking for dropped pins rather than sweeping, by the name of broom. Perhaps you may think the floors are all carpeted—on the contrary I never saw the first one of these household comforts.

This district is a natural "eccalobion" of swine, and needs no artificial hog hatching machine to encourage the natural increase of pigs. With little feeding and less care, particularly when "mast" is plenty, they live, move have their being, independent of their owner, but who nevertheless is dependent on them for his living.

The western district of Tennessee contains an abundance of most excellent land, yet covered with the native growth of forest trees, mostly oak, except upon creek bottom land, and occasionally upon small tracts of upland; where all the kinds of timber usually found upon the richest alluvial land of the west, grow in the greatest luxuriance; requiring a great deal of hard toil to prepare it for culture, but affording an assurance to the husbandman that when once cleared, he will have a soil that no judicious system of culture can ever wear out. But I am sorry to say that that system however, is not pursued generally, as can be seen in the fact after a few years of "skinning," it becomes too poor to produce a good crop of tobacco, and therefore the tobacco planter is annually making additions of new land instead of trying to keep up the fertility of that which was first cleared. Tobacco is a very ameliorating crop, and leaves the land in fine condition, particularly for wheat; which crop however, is but little cultivated, for two reasons—first, the tobacco crop in "wormy time," requires every pair of hands on the plantation that is able to crush a worm, at the very time too when the wheat needs an equal amount of care to save it from total destruction by the weevil, which often destroys the crop even after it has been thrashed and cleaned and stored away. And secondly, the tobacco is a more certain crop in growth and sale for cash, which is the grand desideratum, and which will be sure to prevent the cultivator from bestowing any care towards the improvement or preservation of his soil in a country where new land can be purchased so cheap as it can here, when that first cleared will no longer produce his favorite crop.

On the 7th of Feb., between Dresden and Jackson, Tenn., I began to leave the tobacco and enter among the cotton plantations, the soil becoming more sandy and light, though not showing much more appearance of wealth until within the precincts of the latter town, which is beautifully situated upon a plain, and contains some 1,500 inhabitants, and many handsome mansions; a very fine court house and a college and a flourishing female school. Leaving this place a short distance from the town, we cross the "Forked Deer Creek," over a toll bridge and high clay turnpike over a two mile wide bottom, subject to overflows, and covered with beech timber, which if cleared off and set with grass, I vento say would prove more profitable land than some of the upland. I notice generally that the bottoms are the last to be cleared, but time will prove their value. Out of this stream, the cotton from this region is sent in flat boats to the Mississippi. Between this town and Lagrange, the last town in Tenn., the land grows more and more sandy, and when badly cultivated, is very liable to wash into gullies; some of which, particularly by the road side, becomes perfectly unmanageable. Passed fine cotton plantations, and some very good and some I think very poor land, covered with small black oak timber, and crossed the Hatchee river, which in high water is navigable for steamboats, and like nearly all the streams in this country, having a wide overflowable bottom. We are now fairly entered upon the cotton region, that being the all engrossing crop of this part of Tennessee, and of which I expect hereafter to have much to see and say as I proceed south.

This, 9th of Feb., four miles south of Lagrange, upon a very warm sunny day, I crossed the Mississippi line. The grass to-day looks green and spring like, and plum trees are leaving, and peach buds are just ready to burst into blossom. Much land shows that there has been a good deal of a kind of work done that people really seem to be in sober earnest when they call it "plowing." The weather is more like May than February. Birds and frogs making meloby—grass growing—flowers blooming—gardens making, etc.

From here to Holly Springs, the county seat of Marshall co., and a flourishing fine town, the land grows hilly and sandy, and bottom lands more swampy. The upland timber mostly black oak, interspersed with white oak and hickory, and much of it uncultivated. Some fine farms—horses good—cattle poor and sheep poorer. In the course of the day after passing Holly Springs, I met with the first stone that I have seen since leaving the mountains of Missouri. It is a kind of redish sand and iron stone, and has the appearance of being of volcanic origin. Passed Oxford, the county seat of Lafayette co., and crossed the Tallahatchie river, (I like these Indian names,) which is also another high water steamboat stream, with wide bottom uncultivated beech land, upon which grass instead of trees ought to be growing. Saw mills through all this region being scarce, and lumber from $1.50 to $2.50 per hundred, nearly all the houses are built of logs. Near the south line of Lafayette, crossed the "Yokenatuffa," (a very pretty name when you get used to it,) across a beech bottom, with a liberal sprinkle of the beautiful holly.

On the 12th day of Feb., in Yallabusha county, I saw peach and plum trees in full bloom, and garden peas and potatoes up, and oats sowing. And here in one field I saw 20 one horse, or one mule plows, skinning the surface of this light, loose, fine, sandy soil, and sending it on a voyage of discovery to the gulf of Mexico. And as in this country I am going to initiate my readers into the arcana of a cotton plantation, I will here part company with them, under the assurance that tne country we are yet to ramble over will afford an abundance of incidents far more interesting than that which which we have hitherto visited; and I humbly hope that I may be able so to collect and arrange those incidents that you will be pleased to continue to give a monthly welcome to the familiar face of your old friend,

SOLON ROBINSON.

WATER FOR STOCK—CEMENT PIPES.

MR. TUCKER—Few articles interested us more, in your last volume, than the editorial of the March number, upon the importance of water for stock, and the most efficacious and economical means of procuring it. It is surprising to see how many farmers leave their stock to suffer, and how many inconveniences they submit to, year after year, in this essential matter. It is worth any farmer's while to incur the expense of a pretty deep well, or several cisterns, rather than drag along, year after year, as many do, with stinted rations, because it is so far to bring it. Cisterns are preferable, and generally furnish an adequate supply, if buildings for shelter bear any proportion to the stock kept.

But when thus obtained, the labor of raising it is considerable, and is a serious objection with many. In some cases a daily pumping by the hour would be required. This might generally be avoided by constructing the cistern in a knoll or bank, above the level of some part of the yard, to which it could be conducted in pipes, and let off at will, by a turn of the finger, through a stop-cock or fasset. In the first instance this would be less expensive than a pump, save the daily labor of working it, be less li[illegible] get out of repair, or freeze up, and in ever [illegible])ended on in all weathers and seasons. Where such cisterns are not practicable, they might be placed within the building and made secure against frost at a small expense.

But after all, where the farmer has a stream or spring within a hundred rods, he had better bring it to his yard than rely upon well or cistern. He will then have healthy, living water, better than that from any cistern or well tainted with filtrations from the yard above. Where the supply lies above the yard level there is no difficulty; and when it is below, either wind or water will raise it by means of forcing pumps, at an expense of less than $20, in either case. When wind is used, a reservoir will be necessary to hold a supply during a "calm." Your readers can get a good idea of either method by consulting the Cultivator, vol. 7, pages 47 and 174.

Heretofore the pipes or conductors have been very expensive, and when some farmers have almost made up their minds to take the matter in hand, and free themselves from their inconveniences, visions of logs and lead rise up before their eyes, and they are deterred by the expense attendant upon either of these modes, from doing anything. At least, so it was with us. We had a running stream within a short distance; but your plan of a cheap, home made, cement pipe was not known in this region till brought to notice by the Cultivator. But then there was that (to us) foreign substance—water-lime—to be obtained from the city, at an expense of about 37½ cents per bushel, including transportation and the trouble of procuring it.

Notwithstanding, the *plan* appeared so simple and cheap, and as the whole labor could be performed by ourselves, so I determined to try the experiment with our own lime. I was led to this by a statement that water-lime owed its hardening property to magnesia, of which our lime-stone contained about the same—forty per cent—as the Ulster county lime. This has also been ascribed to silica and oxide of iron. I have since purchased and read Johnston's Chemistry, and the same thing is said there of magnesia, page 367; and yet in a note, page 365, three different water limes are mentioned as having no magnesia at all, but a large per cent of alumina.

In order to test the question in my case, I took four parcels of lime, duly numbered and marked, placed them under water, and in a few weeks found the parcel mixed with an equal quantity of sand, had hardened so as to satisfy me of its fitness for my purpose. The other parcels of mortar had, some more and others less proportion of sand. I accordingly used it, half and half of each, sifted, to get out unslacked lumps of lime, pebbles, &c., and laid it down immediately. The lime was just burnt, aud no doubt would have hardened sooner if ground, as I have since ascertained they would have been willing to do at the plaster-mill. I would advise this whenever farmers undertake to use their own lime for cement, although slacking with water may answer, as it did with me.

Upon examining the pipe this spring, after having a full run of water through it all winter, I found the inside as hard as stone, and not washed or worn in the least, as I feared it would be in its new state. I am satisfied this kind of pipe is just the thing for farmers—cheap and durable—conducting the water without taint or defilement from rotten wood or metallic poison, and needing no repairs when properly taken care of. An inch, or an inch and a half bore is large enough for any ordinary farmhouse or yard. I used a rod about an inch and a quarter in size, and five feet long. I thought the short rod you prescribe much too tedious; and I also prefer a ball to the tapered stick you mention, to draw after the rod, in order to smooth and equalize the tube. The long rod should be tapered at the end, a hole bored an inch therefrom, through which to fasten the ball with a strong rope-cord five feet long. Two boards, five feet long and six inches broad, with fastenings, constitute the whole apparatus.

In constructing the work it is best to have it in about four divisions, and the same number of apparatus; begin at the lower end, lay a section on each of the divisions, and then the first will be hard enough to draw the rod; thus the work can proceed without delay for it to harden.

Care must be taken that the rods be not left too long. When bringing the divisions together, a short rod must be used and the joints closed up with a length or two of bricks. When any stoppages afterwards occur, and they will sometimes happen, by taking off the top brick in these joints it can be ascertained in which direction the obstruction lies. Then, by boring with a small gimblet, or some similar tool, the exact position can be ascertained. When the pipe is opened, and it is removed, a thin wooden pipe can be inserted and plastered over with a thick coat of mortar, and the pipe be as sound as before. These stoppages are extremely vexatious, and the head of the pipe should be well guarded with a tight box, and punched tin or sheet iron on three sides. Sometimes small tadpoles or frogs, and other water vermin, get within the tube, where they may grow larger, till they cannot get out, and are a moving obstruction from place to place, which it is exceedingly difficult to remove, without taking up the whole pipe, or one of the divisions at least. The holes in tin or sheet iron should be of the smallest practicable size, and very numerous, that the entrance of these intruders may be prevented.

In digging the trench endeavor to have no part lower than the point where it runs out, even if it must be a little farther distance round. This is necessary in order to have a straight, strong current right through to carry out any sediment in the water, lest it settle in the lowest part of the tube and prove a stoppage. I erred in this matter, having come across a hollow to save distance. Where this cannot be avoided there should be a joint or opening from which the sediment could be removed from time to time as it collects—say once a year.

A short story will tell the tale of expense. With a bushel of lime to every rod, a like quantity of sand, and a man to mix and carry mortar, I am satisfied I can lay more than twenty rods per day. The bill is as follows:

20 bushels of lime and sand,...	$3 00
1 hand to tend, ...	75
Preparing apparatus and laying down pipe,................	1 25
	$5.00=25 cts. per rod.

Our mechanics here want 60 cents per rod for putting down logs, with timber, hands, board, &c., all found them—in all, probably about $1.25. I have made no account of digging the trench, for that is about the same in all cases, whether wood, lead or cement be used.

My experience has made me the warm advocate of cement pipes, and I can see no reason why any farmer should be without running water in his yards, if there is a spring or stream within a quarter of a mile. Even where water-lime must be had, the expense need not much exceed fifty cents per rod.

And now, Mr. Editor, if this statement shall induce any of the readers of the Cultivator to avail themselves of the advantages of cement pipe, I shall enjoy an extra satisfaction, over and above that experienced during the past winter, in seeing our stock so conveniently provided with this great essential to their thrift and comfort.

A. R. D.

Ha. kettstown, N. J. July 2d, 1845.

ERROR CORRECTED.

In the last volume of the Transactions of the State Agricultural Society, the opinion is advanced, in the essay on the Cultivation of the Apple, that all the varieties of this fruit originated from the native species in England, known by the name of *the crab*. This opinion, it is true, has the authority of the most of modern botanists to support it, and nearly all horticultural writers; but errors are often copied from one to another, without sufficient examination. Great men sometimes make great mistakes; and Professor Lindley, one of the highest botanical authorities in Europe, not only considers the apple as an improved variety of the crab, but speaks of the Green gage and other plums as having originated from the "Savage sloe," although the cultivated plum, or *Prunus domestica*, is a species totally distinct from the sloe, or *Prunus spinosa*.

Ray considered the English Crab as a distinct species from the cultivated apple. And those who regard them as only varieties, give distinctive characters more striking and permanent than many which separate species universally admitted as distinct. They are the following:—

CRAB TREE. Leaves ovate, acute, villous underneath; styles bald; fruit the size of a chestnut, acerb, astringent, austere.

APPLE-TREE. Leaves ovate-oblong, acuminate, glabrous; styles villous; fruit more or less sweet.

Whether these characters be admitted as sufficient for separate species or not, one fact must be admitted, that although the crab has grown in England from the remotest antiquity, no variaton in it whatever has taken place; while the cultivated apple appears to have been unknown there until it was introduced by the Romans, and is well known to be subject to interminable changes.

It will be borne in mind that the American crab is a totally distinct species from the common apple, and from the English crab. J. J. THOMAS

Macedon, 6 *mo.*, 1845.

DAIRY—QUALITY OF MILK.

In many parts of the country the dairy is such an object, and it is so desirable to have a living machine that can convert, in abundance and perfection, the food it consumes, to so useful, so profitable, and so essential an article, as milk, that the breed the most distinguished for that property must always be in great demand. But whether a particular breed should be kept entirely for that purpose, or whether it is preferable to have stock partly calculated for the butcher, and partly for the dairy, is a point well entitled to the most deliberate consideration. It is probable a breed might be reared by great attention, the males of which might be well calculated, in every respect, for the shambles; and the females of which might when young, produce abundant quantities of good rich milk, yet when they reached nine or ten years of age, might be easily and quickly fattened. This would be not only the most desirable, but the most valuable breed that could be propagated, and from an experience of fourteen years, we have found the Durham Short Horned breed as aproximatıng the nearest to that point; but they require as a condition, an abundance of rich, succulent food, and warm, comfortable quarters in winter.

One good cow full fed is worth more for the dairy than four ordinary half starved ones. As an illustration of the truth of the above fact, we quote the following from an English publication. "A farmer, some years since, kept *eighteen* cows upon a *common*, and was often obliged to buy butter for his family. The common was *enclosed*, (which deprived the farmer of his pasture;) and the same person supplied his family amply, with the milk and butter from *four* cows *well kept*."

An ordinary cow fed on young clover should give for the first three months after calving, from fifteen to eighteen quarts of milk per day, which will produce, if of good qualitv, 1¼ lbs. of butter—or nearly 9 lbs. per week. Where the number of cows is greater the average will be less, because where there is only one or two cows, a deficiency in one of them is immediately noticed; the cow is got rid of, and a better one substituted.

The excellency of a dairy cow is estimated by the quantity and the quality of her milk; and the quality of the milk is estimated by the quantity of butter that it will yield. Much depends on the quality of the food, but more on the animal. The writer has known one cow whose milk would not produce butter, and never was discovered while milked with the herd, but was soon apparent when separated and milked alone.

There is a simple instrument, called the Lactometer, used for measuring the relative qualities of cream which the milk of different cows, at the different seasons of the year, affords. It consists of a mahogany stand, supporting six glass tubes of equal length and diameter. These tubes are marked ten inches from the bottom, and graduated down in 10ths of an inch for three inches. Now, the milk from the different cows is poured into each tube, (which should be marked with the name of the cow,) and filled to the upper or ten inch line, and the number of degrees the thickness of the cream occupies in each tube, indicates the per centage. For example, if the bottom of the cream stands at 1 inch, it denotes 10 per cent. cream.

In a trial, with one of these instruments, of seven cows, six weeks after calving, in the months of March and April, we found they varied from 13 to 7¼ per cent. Out of the seven cows the milk of two produced, after standing twenty-four hours in a temperature of 48 degrees, thirteen per cent cream—one twelve and another eleven per cent, in the same temperature. Another at 46 degrees 9 per cent, while two at 40 degrees stood at 8¼ and 7¼ per cent. The milk of four cows mixed, in a temperature of 48 degrees, marked 11 per cent. Now, it is well known by those have paid any attention to the subject, that temperature has considerable influence in raising cream, which may, in part account for the low per centage of the two last named cows; but in other trials we have found they varied from 7 to 20 per cent.

After comparing the accounts given in a variety of places and situations of the average quantity of milk which a cow gives when kept alone, and well fed as they generally are, with a full supply of food, such as they relish, to the extent of their appetites, the result is, that it greatly exceeds that of our best dairy herds, and the quantity of butter made from a given quantity of milk is also greater.

I am aware that high feeding of milch cows on grain, is not generally believed to be profitable, but I am satisfied that the cows would give milk nearly the whole year, be made good beef at the same time, and their calves would be much more valuable.

If cows are ever allowed to fall away low during winter, in vain shall we hope to obtain an abundant supply of milk by bringing them into high condition in the summer; for if a cow be lean at the time of calving, no management afterwards, will ever bring her to yield for the season anything like the quantity of milk that she would have done, had she been all the while in high condition.
C. N. BEMENT.

American Hotel, Albany, August, 1845.

AGRICULTURE AND MINES OF N. CAROLINA.

Having passed over the principal part of this State during the last year, I have thought perhaps it might interest some of your readers to give a sort of flying account of it. This State possesses as many natural advantages as any other in the Union. The eastern part of it has large and extensive fisheries for herring and shad. The planters who live on the coast and on the banks of the rivers, nearly all fish during the season. The offal of the fish is used by them as manure. This, together with the shell marl beds which are found in all the lower counties, enables the planters to make large crops of corn, wheat and cotton. The marl, however, is not yet much used, as its application is not well understood. The land is generally low and level, formed of a deep alluvial bottom, and strongly acid. About five feet from the surface the formation of shell deposit commences, and extends in some places to the depth of ten feet. The marl laying so near the surface, renders its application easy, which would neutralize the acid and render the soil more friable. Large tracts of land, which will now hardly bring weeds, by a good marling could be made to produce heavy crops. The county of Terrel is celebrated for its grapes and Scuppernong wine, several thousand gallons of which is made every year, but mostly for home consumption. On the bank of the Cape Fear river some attention is paid to the culture of rice; the fields are quite extensive and very handsomely laid out. The lands in the western part of the State are generally good, especially when you approach the mountains, and nearly all the counties west of Raleigh, are rich in minerals; several extensive gold mines are in active operation, and pieces of native gold have been found worth seventy dollars. In Davidson county there are some silver mines which are worked daily with from fifty to one hundred hands, yielding a good profit. Copper mines are numerous, but little or no attention is paid to them, as the process of smelting is not understood, and the transportation of the ore too expensive, with the present state of the road, to send it to market. A survey of turnpike roads was ordered by the last Legislature, and as soon as it can be completed there is little doubt but that copper mining will be found as profitable as the others. The principal crop of the mining region is cotton, but the low price and the distance from market, has caused many of the planters to turn their attention to mining, which will shortly prove very lucrative. There is great want of labor-saving machines here, both in mining and agriculture.

Your paper has a good circulation in North Carolina, and its effects are plainly to be seen. Almost every intelligent planter will *tell you*, or *show you*, something that he has learned from the Cultivator. The low price of lands, and the facility with which they could be improved offers great inducements to emigrants, and the investment of capital in this state.

Your friend, JOHN C. MATHER.

Raleigh, North Carolina, July 14th, 1845.

LETTER FROM DR. LEE.

The Dairies of Chenango County—Science of Agriculture—The Crops.

Smithville, Chenango Co., N. Y., July 15, 1845.

This county has long been noted as a good grazing district, and admirably adapted to the production of butter, cheese, beef, mutton and wool. Its broken surface and high hills seem to attract clouds loaded with vapor and rain, which, falling on the most elevated points, irrigate the whole district, and sustain numerous living springs. Pure cold water and a plenty of it, may be regarded as indispensible to the dairy business. In limestone countries, the rocks are so full of seams and cavities that most of the water which falls in rains soon finds its way so far below the surface that the roots of the cultivated grasses cannot reach it. On the side hills and in the valleys of Chenango county, the grass is remarkably green and luxuriant for this season of the year; owing, mainly, to an impervious subsoil, which keeps the water near to the surface.

I have visited a number of fine dairies. In several, the butter is contracted at 13 cents a pound. The expectations of the cheese-makers are pretty well raised, in view of a better market in England than they have realized at home. In large butter dairies the cream or milk is churned either by water power, or the weight of a large dog or sheep walking on an inclined wheel. A sheep that will mate with cows, churn 30 or 40 lbs. of butter a day, and yield its owner 5 pounds of good wool a year, is truly a valuable animal. There are such in this county, which run and jump on a tread-wheel and churn for an hour with more spirit than any boy or girl that I ever saw attempt to extract 20 lbs. of butter from a churning of milk or cream.

Pans of milk set for the cream to rise should be placed not on board shelves, but either on cool flat stones, or on *slats*, so that the cool air can circulate under the bottom of the pan as well as around its sides. A well flagged stone or brick floor, moistened with cold water, keeps down the temperature of the milk house. The butter is worked over by a machine which I will not attempt to describe, that manages 40 lbs. at a batch, and does its work much easier than a ladle. Ground Turk's Island salt, or Liverpool, is preferred, and generally used. The cows are never left in the yard over night, and never denied a plenty of good fresh feed.

The shale and sand stone rocks of this region seem to yield, as they are decomposed, lime, potash, soda, magnesia, clay, silex, chlorine, sulphur, phosphorus, and the oxide of iron, enough to produce good crops of *grass*, but not enough of all these minerals, to make good crops of wheat. If we analyze the ash of timothy, which grows so luxuriantly in this section, and that of a ripe wheat plant, we shall find that the simple minerals contained in both are precisely alike in character, but very unlike in *quantity*. Thus, if 100 ounces of dry wheat, carefully burnt till all the organic mattter—carbon, nitrogen, and water—are driven off, there will remain some two ounces of ash. If we test this for phosphoric acid, it will yield, according to Boussingault, 47 per cent. of that substance. To make an acre of wheat plants sufficient to yield 20 bushels of grain, the seed must have 12 lbs., and the straw 5¼ lbs. of phosphoric acid. A good crop of timothy will require only one third as much phosphorous. If the bone earth, (phosphate of lime)—which enters into the organization of two acres of grass, were added to an acre that already had one third enough to give a good crop of wheat, undoubtedly such a crop could be grown. Pure carbonate or caustic lime will not answer to form bones. And as the skeletons or bones of corals and shell fish do not abound in the shale and freestone rocks, which live south, and above the limestone strata in this state, we see why the soil in the southern tier of counties will yield an abundance of such plants and seeds as require but little bone earth, while such as need, like kernels of wheat, 47 per cent of phosphoric acid to combine with their alkaline minerals, can not flourish. Lime, potash, sulphur and ammonia, are very useful, nay, indispensable to the production of wheat, as well as corn, oats, grass, and potatoes; but they are all alike valueless and unavailing if the soil contain no *phosphorous*. Those lime and shale rocks that most abound in organic remains are richest in phosphates. Hence, in selecting lime stone to be burnt for agricultural purposes, such as contains most corals and shells should be preferred. All the salts which enter the mouths of our domestic animals should be saved as they escape from their bodies. The supply of these minerals, without which we could raise no food for man or his cattle, is not inexhaustible. Give me a plenty of bones, potash, common salt, and plaster of Paris, and I will find sand, clay, iron, nitrogen, and carbon enough in any soil in the state to grow good crops of any plant adapted to the climate.

More than one half of the ash of potatoes is pure *potash*. Acting on this hint, I have found in my tour scientific farmers, who by the use of unbleached ashes, lime and plaster mixed in equal parts and placed *in the hill* with the seed, and *on the hill* as soon as have wholly escaped the pototoe rot, and harvested for several years, from 500 to 690 bushels per acre.

In transforming carbon and water into starch, not only in potatoes, but in the seeds of all cultiveted plants, *potash* plays an important part. In changing vegetable acids in unripe fruits, like green grapes, cherries, and apples, into grape, and cane sugar, the agency of this alkali is no less controlling. A sugar maple, a grape vine, an apple tree, and a potatoe plant need a soil that abounds in potash. Take from your fields 200 bushels of potatoes this fall, and you will remove from it sixty three pounds of this mineral. One bushel of ashes, by those that have used them, are said to make ten extra bushels of potatoes.

I am happy to see a growing interest every where taken, by plain, working farmers in the science of their noble profession. They fully comprehend that it takes many *things* to form a single blade of grass; and that these things must exist *somewhere*. To be able to lay one's hand on to every substance that makes grass, grain, tubers, roots, milk, butter, cheese, wool, flesh, fat, and bone; and to know how to combine these substances in the best possible manner to accomplish the great purpose of the husbandman, are advantages of the highest importance to all practical farmers. The idea of creating potatoes, bread, or meat, out of nothing, by dint of blind, hard work, will soon give place to better notions of cause and effect. The light of modern science, which reveals the unerring laws of Nature, will soon force its way into the common sense and common practice of a large majority of New-York farmers. All admit that the laws of matter, which transform crude earth, air and water, into human food and raiment, are not to be despised by any tiller of the soil. Many study these laws, and work according to their dictates.

The frost has done much injury to timothy in this quarter, having killed acres so that it will not head out, nor yield anything but a light clip of mowing. Beech, and some other forest trees, have suffered pretty severely by the same blighting agent. There is no fruit except a few currants, that I have seen in the Chenango valley. This county gained only 17 in its population from 1835 to 1840. To give a few large sheep and dairy farms, many have sold and emigrated to the new countries of the west. Not a little flour which has crossed lake Erie is consumed in this county. Some are trying to raise wheat by the use of lime. If they would add salt, plaster and ashes, their success would be more signal. Urine should be applied to furnish the soil what phosphorus the lime and ashes might lack to make 30 bushels of wheat per acre. The plaster and urine ought to be applied together, and the salt, lime and ashes. Fifteen or twenty bushels of the latter compound would suffice for an acre, and three bushels of plaster. As a general rule a poor soil needs more than one, two, or three of the elements of plants, which number fourteen. Plaster and common salt yield four of these elementary bodies, and yet they furnish the hungry crop with no potash, no silica, no iron, and no phosphorous, which must be had, to say nothing of carbon, nitrogen, alumina, and magnesia.

D. Lee.

THE PEACH A DISTINCT SPECIES.

In *George Bancroft's* Address before our State Agricultural Society at Poughkeepsie, he asked, "Whose efforts led the way in changing the rough skin of the *almond* to the luscious sweetness of the *peach?*"

It is not surprising that the orator should have acquired this idea in the course of his miscellaneous reading, when such men as the late *Thomas Andrew Knight*, President of the Horticultural Society of London, was an advocate of this doctrine,—partly in consequence of some *hybrid* which he had produced between the peach and the *almond*, and partly because the *peach* is not mentioned in the Bible. He therefore concluded that the *latter* tree was only a variety of the *former*, and comparatively of modern origin.

Since the publication of President Knight's opinion, however, it has become known that ["the peach] is found *wild* in different parts of the Himalayas"[*]—the only country in which it is known to be wild; and also that a distinct kind—a new species—has been found in that region. These facts appear in my view to explain the silence of the Scriptures on this subject,—the peach not having found its way into Persia, nor the Jews become acquainted with it when those books were written.

The following arguments go to prove that the peach is a distinct species:

"Its *solitary* flowers constitute one of the most striking traits of its specific character,[†] while those of the almond are *in pairs*. These traits are given by botanists as constant; and though the inflorescence differs not, except in *number*,—yet *number* when constant, is freely and unexceptionably admitted into specific characters in other genera. In *Mitchella*, *Linnæa*, or *Xylosteum* no part of even the generic character is more unvarying than the *geminate* position of the flowers.

"A specific difference may also be shown from the numerous and multiform *varieties* into which the peach is annually spreading, when contrasted with the more permanent character of the almond. A case nearly parallel may be found between *Ribes rubrum* (the common currant) and *Ribes grossularia* (the garden gooseberry). The former, like the almond, has not produced more than six or eight well known *varieties;*—while those of the latter, like the *varieties* of the peach, are too numerous to be recorded." *American Farmer*, vol. 13, page 323.

Another circumstance, which appears to have been strangely overlooked, is, that the *shell* of the almond splits open to discharge the nut, while the *pulp* of the peach has no determinate opening. This is not only sufficient of itself to show that they are different species, but also that they scarcely belong to the same family; and *Persica* has been proposed or adopted by Royle as the name of the new *genus*.

David Thomas.

Greatfield, Cayuga County, 7 *mo*. 8, 1845.

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[*] *Royle's* Illustrations of the Natural History of the Himaylayan Mountains, &c.

[†] As given by botanists; but I consider the second argument not less conclusive than the first.

"HONOR TO WHOM HONOR."

In no part of the world is the effect of individual effort so signally illustrated, and in none is the encouragement so ample to make such effort as in our own country. The rewards of industry and perseverance are sure as they are great. Improvements in the various departments of useful labor are the happy result of such a state of things. These are seen in whatever pertains to agricultural and mechanical inventions; in the numerous *institutes*, *societies*, and *clubs*, all instinct with the desire and purpose to diffuse information and to devise expedients for increasing agricultural and mechanical industry and skill and thus add to the sum of individual and national wealth. But it may sometimes happen in relation to a given enterprise, that those who originally set the ball in motion, are overlooked in the ardor and *eclat* of subsequent advancement. This train of thoughts is the result of a recent interview with my friend Alexander Walsh, Esq., of Lansingburgh, who I was happy to find recovered, in some measure, from his severe attack of illness, and still regarding with his wonted interest the great cause of mechanical and agricultural improvement. Reminiscences of the past were freely indulged, especially interesting in relation to the rural department of the AMERICAN INSTITUTE. And the sentiment which I have placed at the head of this article, claims, in its application to Mr. Walsh that facts gathered from him be communicated to the public, as they exhibit his agency in originating or in giving an impulse to the rural department of the institute that has been increasingly felt from year to year until the present day, when the interest and value of those exhibitions are universally acknowledged.

About the year 1834, it appears Mr. W. sent for exhibition by the Institute to S. Fleet, Esq., N. Y., now editor of the New-York Farmer and Mechanic, quite a number of rare plants. They came to hand in season, but perhaps because not properly brought to the attention of the Society, few examined them, and they were not publicly noticed.

From a conviction that Floral and Horticultural displays would greatly add to the public interest in the Fairs of the institute, another attempt was made by Mr. W. two years after the period last mentioned, to induce the managers to prepare a commodious room for the reception of plants, &c. At that time, such a room could not be obtained in any part of Niblo's garden, where the Exhibitions are held, but as a substitute some plank were nailed up among the pillars of the saloon, as being the only place that could be procured. The rough, unsightly fixture was immediately filled with the showy products of the gardens, and the display of fruits and flowers gave great satisfaction to the visitors. This prompted the society to efforts, at a subsequent festival, for obtaining a more suitable place for this part of their exhibition—and a room, in the language of Mr. W., "seven by nine," was eventually procured up stairs—invitations were freely sent out to many florists and gardeners to aid in the contemplated display, to which they promptly and cheerfully responded in a liberal supply of flowers, fruits, and vegetables. These were all arranged with as much taste and order as circumstances allowed, and the entire exhibition was an evident advance upon the one preceding; the small room was constantly crowded and its adornments received the most marked attention. The feeling thus manifested pleased the managers of the Institute, and they determined on the returning season to devote to this part of their exhibition, a large and handsome show room.

> "Parva metu primo mox sese attollit in auras."

The time of the next annual festival came, such a room was selected, and Mr. W.'s highest taste and ingenuity were put in requisition for the display of the increased varieties presented of the products of the garden—fruits, flowers and vegetables, and of the farm, grain and roots. The arrangement of the products of the garden and farm, greatly enlarged in their number, and the variety of their species, was made with taste and neatness. Then in the centre of the room you beheld a beautiful fountain of several jets and continual flow during the exhibition, surrounded by several walks around which were orange trees adorned with fruit as well as other rare plants. There were also cast iron sofas, an article procured for the occasion, and that, on this account, became extended in their use, sun dials, resplendent vases, &c.; and the piano too was there, and music with her voluptuous swell, was heard chaunting the praises of agriculture, and singing the songs of Flora. These statements are but an outline. The scene was the favorite one of the exhibition—the resort of beauty and fashion—of wealth and intelligence. The increased number of visitors thus drawn to the fair, increased the inducements to agricultural and mechanical display in the succeeding year, and since that time, the fruits of human invention and discovery, in the shape of agricultural, gardening, and mechanical instruments, and apparatus of various kinds for uses almost without number, are now every year brought forward for display, and in the hope of obtaining premiums, and these with the fruits and flowers, poured in from far and near, form a most delightful commingling of art and nature, upon which thousands gaze with high satisfaction.

The *American Institute*, with its enterprising and public spirited managers, its conversational meetings, its useful publications, and its vigilant and fostering care of every useful improvement that is made in agriculture and the mechanic arts, has assumed a prominence and acquired an influence for good, doubtless, even beyond the most sanguine expectations of its early projectors and friends. While all must desire that its course may be onward to still greater influence and honor, it is fit also that the due meed of praise and of grateful remembrance be awarded to the men who early devoted their time and energies to its concerns, and whoever shall hereafter write a full history of its course, must include among their number, and honor with a prominent place the name of ALEXANDER WALSH. UTICA.

COARSE AND FINE WOOLS.

TO DR. J. P. BEEKMAN—The difference in quantity between coarse and fine wool has been exaggerated—I mean the quantity of clean wool produced from the same amount of feed. It is well known that the heavy fleeced coarse wooled sheep are much larger than the Saxons, and require feed in proportion; but the weight of fleece is not greater in proportion to the size of the carcase. The Merinoes cut a heavier fleece, but not so clean wool; the difference in amount of clean wool from sheep of the same size, and from the same amount of keep, is not so great as has been supposed. It begins to be understood by wool-growers that a fine fleece is not necessarily very light. A long staple is looked upon now by manufacturers with more favor than formerly; and it is found that a long staple is perfectly consistent with a fine fibre, and that long wool is less affected by the weather than short, as the fibres are affected only near the outer ends. A thick fleece is also better: first, because there is more of it, and second, because being less exposed to the action of the weather, it is softer.

Now these good qualities may be found in some families of the Saxons. It is not unusual for large flocks to cut from two and a half to three pounds per fleece; and thus where there are no fat sheep, or wethers over three years old, but ewes and young sheep, kept chiefly for their wool, and of course as large a number kept as consistent with the thrifty condition of the sheep.

There are many bucks from the flocks of Thomas W. Swift, of this town, which cut from five to six pounds, and more. This flock has given an impress to most of the fine wool in this place, I have a buck of the same flock, whose fleece this year weighed seven pounds fourteen ounces of well washed wool; he had been lagged also as is usual in the spring; he is three years old, a pure bred Saxon, and his wool is nice.

The Merinos are undoubtedly an excellent breed of sheep, and those families are probably to be preferred which approach the Saxons nearest in the fineness and clearness of their wool, that which wastes least in clensing. But a heavy fleece, without regard to the size of carcase, or grossness of the wool is not the sure criterion of a profitable breed. It is a maxim with farmers, "As fine as you can, but heavy." Others reverse the maxim, but say the same thing—"As heavy as you can, but fine."

I visited the "wool depot" in Kinderhook with great pleasure. I venture to say that it would be difficult to collect seventy-five thousand pounds of nicer wool without making a particular selection. The manner in which it is washed, put up, and arranged, must make it an attraction to manufacturers.

I will only add that the sale of wool in this part of Dutchess county has been, for the best quality, not full blood, fifty cents per pound.

Yours respectfully, NEWTON REED.

Amenia, Dutchess County, July, 1845.

KILLING ALDERS.

We publish with pleasure the following article, though confessedly unprepared to admit the idea of lunar influence as therein expressed. The long experience of the writer, however, (he being, if we make no mistake in dates, in his *ninety-fifth* year!) renders his remarks valuable, and justly entitled to respectful consideration. We should also be pleased to receive any facts from others touching the same subject. If the result of cutting alders on any particular day has been demonstrated to be more effectual in eradicating them than when cut at any other time, it is obviously important that it be known. Establish the certainty of this result, and speculation in regard to the *cause* is unnecessary. The difference in the durability of timber cut at different times, is undoubtedly great. Our venerable correspondent intimates that he may "prescribe" a proper mode to be pursued. We should be happy to hear from him.

MR. TUCKER—In the Cultivator for June I observe, (page 195,) A. H. Halleck, Esq., says there is a certain time to cut alders to eradicate them. He might have added in *some years*, and rendered a reason. It is no new thing, for I have known it more than eighty years, and it is well known in Berkshire. My first twenty years I lived in Hatfield—(was Col. Partridge's ninth of thirteen children.) He had a pasture, two-thirds of which was almost level with the mill-pond—not miry, but as fine a place for alders as ever was, and also excellent for grass; so that on leisure days alders were cut, piled and burnt; but grow they would, and a perpetual war was waged against them. One day, (say in 1756, his two hired men cut near an acre, and not a sprout came. My father believed that it was owing to the time they were cut, but not noticed soon enough to be remembered. He being both a civil and military officer during the war with France for Canada, i. e., from 1755 to 1761, his house was ever thronged with company, and from all parts of the country; and he did not forget to inquire for a time to kill alders in his favorite horse pasture. In about two years, a man told him that Dr. Elliott, of Guilford, Ct., had, in a small treatise on husbandry said, to cut alders in the old (or wane) of the moon, having the sign in the heart, (i. e., when passing Leo,) *they would bleed to death;* and I have found if cut at that time the sap flows freely till they are exhausted, and no more grow.

In 1771, I came to Stockbridge, (a feeble stripling,) on account of my health; and Dr. Sargent, my friend, had in his twelve acre horse-pasture five acres of alders, so thick it was difficult to find even a horse among them; and since, I have owned four lots with alders in them, and all were years ago destroyed by one cutting at the aforesaid time. So long ago as when we had but one newspaper in Berkshire, I advertised that if people would cut off their alders on a certain day, I assured their destruction. Some considered it a trick, and even called me an impostor. Some, however, knew me, and the result was that plenty of alders were cut with the desired effect.

Yours, &c., O. P.

P. S. It is lamentable that there is no more attention paid to cutting timber and fencing-stuff. It is but a little more work to make a fence of wood that will last fifty or sixty years, than one that will rot down in twelve or fifteen years. I may, perhaps, prescribe.

Stockbridge, Mass., June, 1845.

SELF-ACTING PUMP.

LUTHER TUCKER, ESQ.—It is with much pleasure that I comply with the request of a gentleman connected with your journal, (Mr. Howard) in furnishing a few statements with regard to a new self-acting pump which I have lately set in operation, and which, I think, promises to be of some value to the public; and to no portion of it more so than to agriculturists. Notwithstanding the multitude of ingenious contrivances which have hitherto been devised for obtaining water for economical and ornamental purposes, the most valuable is the old and simple plan of bringing it from some neighboring spring or water-course which flows upon a higher level than that on which the supply is needed. This method, although frequently attended with considerable expense, is almost universally adopted where it is practicable, in preference to the best constructed pumps for raising water from a lower level to a higher. The situations, however, where this plan can be adopted are not numerous, except in mountainous regions. Buildings occupied as dwellings, or otherwise, except in such places, are generally located on high ground, where water cannot be procured by an aqueduct or conduit pipe. In such places it is universally obtained from wells situated on such high ground, and in innumerable instances in the immediate vicinity of ravines and small valleys deeper than those wells. In such cases it is obvious that a syphon might be led from the bottom of a well over into the low ground, the current through which syphon would afford a mechanical power, which, if it could be economically applied, would be sufficient to raise a steady and perpetual supply of water upon the elevated level where it was wanted.

These considerations induced me some months since to consider whether a syphon might not be so constructed as to discharge water at the summit of its curve, that is, at the highest point in the pipe of which it should be constructed. The idea at first appeared somewhat absurd, as those who are acquainted with the operation of the common syphon may suppose, inasmuch as in no point of a syphon is there so strong a resistance to any force tending to divert a portion of the enclosed fluid from the pipe than at the summit of the curve. The problem, however, is solved, and the contrivance which has accomplished the solution has been tested, and proved perfectly successful. The preponderance of the column of water in the longer leg of a syphon, which I have recently laid from a well fourteen feet deep, over into a neighboring ravine twenty-two feet deep, furnishes a sufficient mechanical power to deliver about one-third of all the water which enters the pipe at the bottom of the well, at the summit of the curve, two feet above the mouth of the well. The length of the pipe which goes down into the ravine is about ten rods, more than half of which distance it is laid in ground nearly level. The shorter leg of the syphon descends perpendicularly into the well, and is constructed of lead pipe of an inch calibre. At the summit of this pipe, and connected also with the pipe which passes down the hill-side, is the apparatus for discharging the water, of such dimensions that it might be enclosed in a cubical box ten inches square. I have omitted to mention that the pipe which passes into the ravine is about three-fourths the calibre of that which descends into the well.

The amount of water discharged by the apparatus, two feet above the level of the ground at the mouth of the well, through a half-inch pipe with a free aperture, is little more than a gallon per minute. If the pipe is laid upon the ground, and its adjutage contracted by a jet tube with an aperture of one-eighth of inch in diameter, the jet rises seven feet and a half above the mouth of the well; with another jet tube of one-sixteenth of an inch in diameter, it rises thirteen feet; and with another of one-twentieth of an inch diameter of adjutage, between eighteen and nineteen feet. Indeed there is no definite limit to the altitude to which water might be raised by this method, if the size of the syphon be increased, and a sufficient supply of water obtained for working it.

It may appear incredible that a syphon can be so constructed that no definite amount of pressure shall be sufficient to restrain the escape of a portion of water from an opening in the summit of the curve, while in the ordinary syphon, a very small aperture at that point, communicating with the open air, destroys its action instantly; yet this apparatus demonstrates that it can be accomplished, by an extremely simple and compact contrivance, and on any scale that may be required, from a miniature model that will discharge its gill per minute, to an engine that will elevate a hogshead of water in the same space of time.

The apparatus is, moreover, so extremely durable, and so constant and certain in its operation, that it furnishes all the advantages of an aqueduct which brings water from an elevated level. The invention is capable of application to any good well or water course, which admits of the operation of a syphon, even though such well or water course should be a hundred rods, or more, distant from the lower level which should furnish the working power.

When applied to wells, I think it cannot fail to improve the quality of the water, as it is constantly changed and kept in motion.

Such an invention, if successful, places at the disposal of thousands of farmers, manufacturers, and gentlemen who appreciate matters of taste and luxury as highly as those of mere utility, a supply of water for use or for ornament, which it would be impossible for them to obtain in a more simple, cheap, or economical manner.

When my arrangements are completed for offering my invention to the public, I shall be happy, with your permission, to avail myself of your valuable journal, for the publication of a more minute description of this syphon, accompanied, perhaps, with a drawing. In the meantime, I shall take pleasure in showing the practical operation of the one which I have already constructed, to any of your numerous subscribers who may be sufficiently interested in the foregoing statements to call and see it.

I am, sir, most respectfully yours,

ERASTUS W. ELLSWORTH.

East Windsor Hill, Conn., July 18th, 1845.

DR. LEE'S ADDRESS IN CORTLAND.

ED. CULTIVATOR—Pursuant to notice, Doct. DANIEL LEE, the lecturer of the State Ag. Society delivered an address to the farmers of this county, in the Court house, on the 19th inst.

Rufus Boies, Esq., of Cortlandville, Pres't. of the County Ag. Society, presided, aided by the following Ex-Pres'ts of the Society—Jesse Ives, Esq., Doct. John Miller, Jedediah Barber, Esq., and William Randall, Esq. [Only two of the Vice Prest's were absent; Judge Berry, who has removed to Wisconsin, and Dan Hibbard, Esq., who was confined at home by illness.] George Chamberlain, Esq., Sec'y of the Society, acted as Secretary.

The audience, all circumstances considered, was large, and it was a capital representation of the enterprize and intelligence of our county. The address occupied probably an hour and a half, and was listened to, evidently, with profound interest and attention. I speak advisedly when I say it gave high satisfaction to *all* present.

At the close of the address, on motion of P. Barber, Esq., of Homer, it was unanimously

Resolved, That the thanks of the farmers of Cortland county be tendered to Doct. Lee, for his able, interesting, and highly instructive address.

On motion of H. S. Randall, of Cortlandville, it was unanimously

Resolved, That we highly approve of the course of the N. Y. State Ag. Society, in employing a lecturer to arouse the attention of the farmers of this state to the subject of agricultural improvement, and to communicate to them the recent important discoveries which have been made in their art, by means of Agricultural chemistry.

Doct. John Miller, of Truxton, rose and addressed the meeting for a few minutes with characteristic energy of thought and expression—congratulated the farmers of this state on the important auxiliary influence which *science* was bringing to bear on the mere physical and mechanical manipulations of husbandry, and expressed the opinion that the time had come when the state should do something to cause the rising generation of farmers to be instructed in the *science* of their art. He could not say the time had yet come when agriculture could be taught profitably in our common schools. He feared not. But it could be taught in a State Ag. School to young men, who could ultimately teach it in the common schools and elsewhere. He was in favor of such an institution, and thought it should be endowed by the state.

Mr. Randall remarked that the society of this county had already taken action on these subjects. They had unanimously voted that a State Ag. School with a pattern farm, ought to be established by the state—that agricultural books should be introduced into the common school libraries, but they had also voted that the time had not yet come to introduce agriculture as a study into the common schools. As many were present who were not members of the society, he would be glad of an expression on the first named topic from this meeting.

Mr. P. Barber, argued that we should not only pass such a resolution, but that we should take care to elect members to the legislature who would carry out our views.

Rufus Boies, Esq., the President of the Society, in a few impressive remarks, concurred in the opinions of previous speakers on this subject.

At the instance of Dr. Miller, the following resolution was drawn up, and it passed unanimously:

Resolved, That the interests of the Agricultural population of this state demand the establishment of a State Agricultural School with a pattern farm, and that our next members of the legislature be requested to urge the passage of such a law.

The meeting then adjourned. R.

MANAGEMENT OF POULTRY.

MR. TUCKER—In the present July number of your Cultivator is an article headed "Fowls in yards," stating that hens kept in small yards often acquire the *habit* of plucking out each other's feathers, till the victims are stripped sometimes almost naked—in some cases even their crops and entrails torn out, &c., &c. The article closes with the following question. "Can any one explain the cause of this morbid appetite, or tell us the best way of keeping fowls in a yard?"

I have had but little experience in keeping fowls, but am in possession of some facts, which may perhaps furnish an answer to the first part of the question; the latter part of it is pretty fully answered by yourself in the article in question. I would remark, however, that hens require a plentiful supply of fresh water; they also need shade.

A yard with a spring in it is a desideratum. Willows may be planted about the water, affording the desirable retreat; and the moist ground will retain the grasses permanently; whereas, in a dry yard, unless it be quite large, the ground will be bare as a roadway from the constant tramping and scratching.

The facts alluded to are as follows. A friend of mine engaged in the poultry trade, and at the commencement of operations, he had several hundred fowls confined in a small yard. They did very well for a period, having been regularly fed and watered; but after some weeks confinement, the habit of plucking feathers manifested itself, and his hens appeared to be losing their good condition. One morning he discovered that one of his fowls had been nearly devoured, the skeleton and some fragments remaining. He supposed some animal had gained access to the yard, set about finding the evidences of the supposed visitor, but without success. At noon of the same day, on looking into the yard, he saw another of the fowls just run down, and a group of hens around it devouring it most voraciously. The next morning another victim suffered in the same way.

He took the hint by this time, and without delay procured and kept them supplied with fresh beef, mutton, &c., and he lost no more fowls in that way.

It is well known also with what avidity hens that are confined in yards will seize and devour insects, worms, mice, &c. These facts would seem to indicate that hens are not Grahamites—that the appetite alluded to is not a morbid one, but a constitutional necessity for animal food, and that if it cannot otherwise be obtained, they prey upon each other. Yours truly, C. S.

N. Am. Phalanx, N. J., July 12, 1845.

MR. ALLEN'S HERD-BOOK.

(CIRCULAR.)

SIR—About a year ago, at the solicitation of a number of gentlemen interested in the breeding of short horn cattle, I published a notice in several of the agricultural papers of the United States, that I would get up an American Herd-Book, provided my efforts should be seconded by a respectable portion of those engaged in that pursuit. Although slow in their responses, a considerable number of breeders have forwarded the pedigrees of their herds for insertion according to the terms of my proposal. Many, however, and among them some of the early and distinguished promoters of this branch of agricultural improvement, remain unmindful of this opportunity of thus recording their valuable stock.

A sufficient number of individuals having already contributed the pedigrees of their cattle to insure its publication, the work will proceed as soon as circumstances will permit, which will be *within three months* from this time.

I presume no arguments will be necessary with any systematic short horn breeder to convince him of the necessity and convenience of an American registry of his cattle, other than such as will suggest themselves to his own mind, and those already advanced in my two several notices to breeders already published.

In case you think proper to register your cattle in the proposed work, you will please transmit your catalogue of thorough bred animals (none other being admitted) with as little delay as possible, to me (post paid) at this place, with the registry fees accompanying them, and stating also the number of copies of the work you wish for, when published.

I will here remark, that the month of October next *will be the latest period* at which pedigrees can be received, as the work will be put in press immediately after.

The terms for registry are as follows:

For a single animal, one dollar.

For any greater number, not exceeding ten, 50 cents each.

For a number exceeding ten, 40 cents each.

The work itself not to exceed three dollars a copy.

If any gentleman of your neighborhood or acquaintance be a breeder of short horns, and not in receipt of this notice, you will confer a mutual favor by giving him the above information.

LEWIS F. ALLEN.

Black Rock, N. Y. July, 1845.

CULTURE OF THE GRAPE.

MR. EDITOR—My plan of a vineyard, after the vines are scaffolded, is, in brief, to have no impediment to a free passage of men, cart, or team, beneath the scaffolding; nor nothing seen for several feet high but main stem of vines and posts; and swine always kept in the vineyard to help to keep the ground clear of grass and weeds. When necessary, I use the harrow, skimmer, plow, or cultivator. And especially before an expected frost or severe weather to cause the leaves to fall, I scarify the ground; and again after they fall, I run over the surface with some instrument to incorporate the leaves with the soil to prevent their blowing away, and to answer in lieu of manuring. Trimming in the summer and early in the fall is good for all vines, (so far as trimming is necessary,) but especially so for the Scuppernong. No danger of bleeding at these times; and these last named vines especially should have plenty of room to expand—say thirty feet apart;—not too great a distance when considered that ere long, with good attention, they will form a thick, complete canopy, at that or even greater distance. Other vines ten feet each way is the common distance. Ten feet also the common distance for all my my posts to support the scaffolding.

In haste, yours, &c. SIDNEY WELLER.

Brinkleyville, N. C., June 6, 1845.

REMEDY FOR A LIGHT CROP.

MR. TUCKER—As there is a general complaint that the grass crop will be a short one, I would advise farmers, when they mow away their wheat in the barn or stack, to spread over every course of sheaves three or four handsful of salt. The straw will always heat enough to absorb the salt, and wheat may be mowed damper with the salt than without it. The straw, when thrashed, if not returned into the barn, should be well stacked; and if a large stack and well settled, will need no fence round it. Cattle, horses and sheep will help themselves, and the farmer will need no straw cutter, and will soon find his straw made into manure, better than by any patent right yet invented. Last winter I fed my colts, cows and sheep hay but once a day till the first of February, with straw that had been salted in the above manner, and they kept as well as when they had hay all the time. Some of my neighbors fed no hay to their young cattle while their straw lasted. In western New-York vast mounds of straw are left in the field from the time of thrashing till the ground is wanted to be plowed, when they are removed by fire; and numbers burn their straw as soon as thrashed, to destroy the pigeon-weed or red-root; but as the seed of this weed ripens long before harvest and drops off, nothing is gained by burning the straw. R. JOHNSON.

East Groveland, Livingston County, July 11, 1845.

THE POTATOE ROT.

MR. EDITOR—In almost every number of your Cultivator, I find something in relation to the rot in the potatoe, both as regards the cause and the mode of prevention.

This, with us, is a disease of comparatively rare occurrence; and may, I think, be justly attributed to our peculiar method of cultivation; and, indeed, so far as I can understand where this plan has been adopted, no case of the disease has ever made its appearance.

In the selection of our land we prefer a light sandy soil, without *great* regard to *the richness* of quality; this having been well pulverized, is drilled to the depth of from five to six inches and from 1½ to 2 feet apart; at the bottom of these furrows and at the distance of eight inches are laid the potatoes, which we prefer being cut with from two to three eyes to a piece; the drills are then filled nearly to the top with the best well littered stable manure; a small portion of dirt is thrown on this so as to level the whole. The entire surface of the ground is then covered with leaves, (*we* prefer *pine* straw,) to the depth of from three to six inches.

It is to the adoption of this last method I particularly allude. The advantages of the straw are obvious; by its use is produced a more uniform moisture, as well as temperature of soil, which is kept perfectly free from grass and weeds, although no farther attention is required either from the plow or hoe, until the maturity of the potatoe; which for their size and number I have never seen surpassed, or equalled by any other method. This plan, with us, although not universal, is becoming much more general and will, I think, in a short time supercede that of any other. THOMAS C. HINES.

Nansemond, Va., July 12th, 1845.

SOAKING SEEDS.

There is an exception to the oft repeated directions to soak seeds before planting. It is *when the ground is so dry as to attract the moisture from the seed.* Then it delays rather than hastens the vegetation, if indeed it does not kill the seed. In all other cases, it is of great benefit to steep, and even scald, the seeds. I have tried all methods for some time, from soaking one hour to sprouting the various seeds, and the above is the result. During the severe drouth this spring, steeped seeds have generally died in the ground, and those only have vegetated that were planted dry. H.

THE CULTIVATOR.

ALBANY, AUGUST, 1845.

TO CORRESPONDENTS.

Communications have been received, since our last, from S. Tillotson, N. B. Cloud, Wm. Bacon, J. Townsend, C. N. Bement, H., David Thomas, H. W. S. C., D. G. Mitchell, S. N. Holmes, E. Hammond, R. Burritt, S. M. Ackerly, Agricola, A. R. D., R. Johnson, Utica, N. Reed, C. S., S. B. Buckley, W. Cushman, S. Robinson, Dr. Lee, Alex. M'Donald, J. C. Mather, T. C. Hines, C. H. R., J. W. G., G. A. Fiske, E. W. Ellsworth, V. Juvenis, A. Eastwood, R.

Our thanks are due to Mr. Downing, for a copy of his "Fruits and Fruit Trees of America"—To Lea & Blanchard, the publishers, Philadelphia, for the 5th and last vol. of the "United States Exploring Expedition"—To Greeley & M'Elrath, for the continuation of Lardner's Lectures on Science and Art—To A. G Summer, Esq., Columbia, S. C., for copies of Gov. Hammond's Letters on Slavery—to some unknown friend, for Judge Rost's Oration before the Agricultural and Mechanic's Association of Louisiana.

☞ We have copious notes of Connecticut Farming, &c., but a pressure of other matters oblige us to defer them for future numbers.

Transmutation Controversy.—We have received from Mr. Townsend, Zanesville, Ohio, a reply to the remarks of "L. F. A.," in our June nnmber. We can hardly think it expedient to extend this controversy, and we hope Mr. Townsend will excuse our declining to publish his letter. The arguments he advances against transmutation are, in our view, correct, and they agree with the opinions we have already expressed. Mr. T. offers to pay all the expenses of an investigation which shall prove *positively* "that a single grain of wheat ever did, ever will, or ever can, turn into chess." Therefore, until some new evidence can be brought forward in favor of transmutation, we can see no necessity of further agitating the subject.

MONTHLY NOTICES.

Good Cows.—Mr. Wm. Cushman, of New Braintree, Mass., has a cow one-fourth Durham, which, he states, gave for ten days in June, from 54 to 63 pounds of milk per day—also a full blood Durham heifer which gave for the same time, 41 to 63 pounds per day. Those in want of Mackay pigs, South Down sheep, or a Durham bull, may be accommodated by applying to Mr. Cush-

Corn and Cob Cutter.—While at Rochester recently, we had an opportunity of witnessing the operation of a new machine for grinding corn on the cob, invented by Mr. Pitts, which appeared admirably adapted for the purpose. Mr. P. has been at work for some years upon it, and thinks he has now succeeded in perfecting a machine which will fully answer the requirements of the farming interest. It is very simple in its operation, permanent in its form, and not liable to get out of order. The teeth are so arranged as to be easily taken out and sharpened, when necessary. It may be worked with a one horse power.

Fine Merino Wool.—We have received specimens of the fleeces of Mr. L. A. Morrell's Merinos, purchased of Jacob N. Blakeslee, of Watertown, and of Stephen Atwood, Woodberry, Conn., and to which were awarded the first and second premiums at the last State Agricultural Fair held at Poughkeepsie, on sheep exhibited from without the State. One of these samples equals in fineness the best Merino wool we have ever seen, and the other is a very beautiful sample. Mr. Morrell informs us that these bucks were fed a little grain about a fortnight before they were placed with his ewes; after which none [illegible] given them. Their fleeces fully equalled his expectations as regards weight. Mr. Morrell's flock of high grade Saxons averaged last year a fraction over three pounds per head, and he appears sanguine that, by proper selections, he can bring it up to nearly four pounds, by means of his Merinos, and yet depart but little, if any, from the present quality of his wool. If he succeeds, his flock will be extremely valuable, and of course, equally profitable. We invite our friends to call and see these samples.

Syphon Pump.—We invite particular attention to the communication of Mr. Ellsworth on this subject, on another page of this number. We have lately had an opportunity of witnessing the operation of the apparatus mentioned, and can assure our readers of the entire correctness of Mr. E.'s description. The application of power in this case we believe to be altogether new, and in our opinion is highly creditable to the ingenuity and scientific knowledge of Mr. Ellsworth. We see no obstacle in the way of this invention becoming useful to a great extent.

Farm for Sale at Auburn.—We had the pleasure of walking over the farm advertised by Mr. Remer, at Auburn, a short time since, and can heartily recommend it to any one wishing for a country residence in the immediate vicinity of one of our pleasantest inland villages.

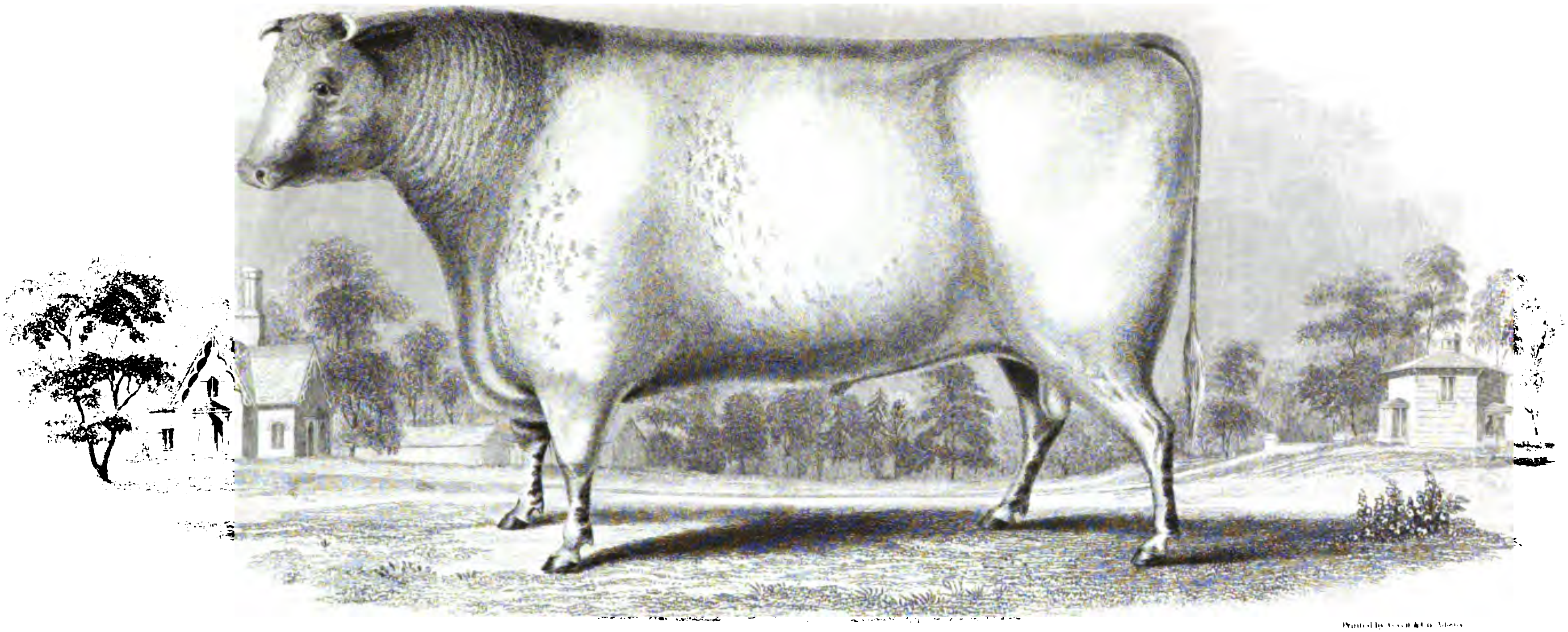
Fine Wool in Michigan.—"C. H. R.," Aurora, N. Y., informs us that several flocks of selected fine wooled sheep have been of late driven from this, and the states of Vermont and Connecticut, into Michigan. That Messrs. Daniel A. Mills and George Barker, of Manchester, Washtenaw county, Mich., have lately selected a very fine flock of about 700 ewes and 50 stock bucks, from the flocks of Mr. Scovill, Ct., Mr. Church, of Vernon, Oneida county, and Mr. Richmond, of Aurora, Cayuga county, N. Y. "C. H. R." thinks these sheep may be relied on as of pure Saxon blood, and as producing the finest quality of wool. He states that "over two hundred young ewes, and thirty stock bucks" of the 700 above mentioned, were taken from the flock of Mr. Richmond, which flock was "chiefly derived from the importations of Mr. Grove and have been kept with great care pure as when imported." "C. H. R." also thinks that Michigan is well calcutated for the production of "fine wool," and that great inducements are offered the farmers there for engaging in this branch of husbandry; he is therefore desirous of informing them that "an opportunity is now presented in this flock of Mills and Barker, by which they can obtain those that are recommended as pure."

☞ We are indebted to Alexander Walsh, Esq., for specimens of the following plants:—Teazel; Madder; (manufactured;) Siberian crab-pplea: Staphylea trifolia, (three leaved Bladder-nut;) White Dwarf Horsechestnut; Pink do.; Gymnocladus canadensis; Upright Honey-suckle; White, Yellow, and Green Mint; Senna; Sea Kale; a specimen of silk reeled in 1827.

American Quarterly Journal of Agriculture and Science.—The third number of this publication is before us. It contains various interesting articles, among which are—Agricultural Geology—Relations of Vegetables and Animals—Drifts and Changes in the Position of Soils—Manures—their action—How Plants absorb Carbonic Acid—Agricultural Science—Husbandry in Central New-York—Practical Directions for the Flower Garden—Animals useful to the Farmer, &c. Edited by Prof. E. Emmons and Dr. J. A. Prime, Albany. Terms, three dollars a year, in advance.

Lardner's Popular Lectures on Science, part vi., is received. Its contents are a continuation of remarks on Radiation of Heat—Meteoric stones, and Shooting stars—the Earth—Lunar Influences—Physical Constitution of Comets. Each succeeding part of these highly instructive and interesting lectures, seems more and more valuable. Price only 25 cents per number. Greeley and McElrath, New-York.

"Catalogue of Camellia Japonicas, green house and stove plants, etc., cultivated at the exotic nursery and horticultural gardens of Valk & Co., Flushing, Long Island." A handsome pamphlet of 92 pages octavo, with valuable directions for cultivating plants in houses and the open air.



Drawn & Engd by Jordan & Halpin for the Cultivator

Printed by [illegible] Albany

[illegible] ELEPHANT (Roan), 4 yrs. old. Weight 2200 lbs

[illegible]

See "British Herd Book" Vol. I. p.382

OUR PLATE—MR. DONALDSON'S FARM.

We have the satisfaction of herewith presenting our readers with a fine steel engraving of the Durham bull "Prince Albert," bred by Mr. Whitaker, of Burley, Yorkshire, England, imported and now owned by Robert Donaldson, Esq., Blithewood, Dutchess county, N. York. In the estimation of good judges, few, if any of the fine bulls which have been either imported or bred in this country, can be considered as surpassing, or even equalling this. He is a bull of great substance, with remarkable symmetry and fineness of bone. The portrait fails to do him full justice in one or two particulars. The head, from the eyes downward, is not sufficiently fine, and does not show the characteristic lineaments of the animal; and there is hardly sufficient breadth and expansion shown to the chest and brisket. In other respects the delineation may be pronounced good.

Mr. Donaldson imported this bull about three years since. His principal object is to rear good milch cows. For this purpose he selected the best common cows to be had, and by crossing with this bull has obtained a small herd of young half-blood Durhams. The oldest stock he has of the cross, are two-year-olds. There are several heifers of fine promise as milkers, and they exhibit a great improvement in symmetry over their dams.

Many will doubtless recollect a native cow of Mr. Donaldson's, called "Kaatskill," which received the first premium in her class at the last show of the N. Y. State Ag. Society. She is a remarkable animal; but we shall not now speak particularly of this cow, as we have an excellent plate of her, done in the same style as that of Prince Albert, which we shall give, together with an account of her productions, in a future number. Mr. D. has also a very superior Ayrshire cow, six years old, which has an excellent heifer calf by this bull. We think well-bred Ayrshires even or a cross between them and the Durhams, would prove highly useful on this farm—an opinion which is certainly supported by the appearance of this Ayrshire cow and her calf.

Few places that we have ever seen exhibit such marked evidence of refined taste, and correct appreciations of rural beauty, as Blithewood. The spot itself is one possessing great natural attractions, and these have been heightened and improved to the greatest possible advantage. It is a promontory on the east bank of the Hudson, embracing the greatest variety of magnificent landscape scenery of any spot of the same extent within our knowledge. The river is here of unusual width, and there are several pretty islands nearly opposite, by which the force of the current is so broken that the water has the placid quietness of a sheltered lake, and reflects with mirror-like vividness, every object on its banks, or floating on its surface. On the west side of the river, a little to the north-west, the Kaatskill group of mountains appear in all their majestic beauty, forming a grand, but varied and picturesque outline to the view for a considerable extent in that direction.

The mansion of Mr. Donaldson, constitutes the frontispiece to Mr. Downing's elegant work on Landscape Gardening and Rural Architecture. Representations of several of the other buildings, as well as various sketches of the scenery at Blithewood are also given in Mr. Downing's work, to which we would refer for a more particular description. The scenery in the background of our engraving, is copied from nature—the building on the right being the gate-lodge, and the one on the left the gardener's cottage—the farm-yard buildings with a grove in the rear, showing between.

The credit of introducing to this country the Rural Gothic, or pointed style of architecture, belongs to Mr. Donaldson. The first specimen of this style was the gardener's cottage above-mentioned, which, for its taste and smiplicity, excels anything of the kind we have ever seen.* Mr. Donaldson was also, we believe, the first to introduce what is called the Bracketted style, several pretty specimens of which are shown among his numerous buildings.

Mr. D.'s garden has been but lately laid out—the present being the first season that the principal portion of it has been appropriated to plants. To secure a favorable site, he has been under the necessity of terracing the eastern declivity of a hill, and forming a soil somewhat artificially. The terraces are formed in a beautiful manner, supported by the most substantial stone walls. An extensive conservatory and grape-house has just been erected, in the most tasteful style. A rich profusion of flowers and shrubbery adorn the garden, and various labyrinthine walks and shady bowers.

The soil of Mr. Donaldson's farm has been much improved, and its productiveness vastly increased, since he came into possession of it, about nine years ago. His outside fences are mostly stone walls, laid in the most systematic and durable manner. His wet grounds, of which there is a considerable portion, have been mostly under-drained, and latterly he has commenced subsoiling, which promises to be of great benefit, particularly to the tenacious soil. A piece of oats on some of the under-drained land, is about the best we have seen this season. His barn is constructed on a convenient plan; his barnyard is well protected by sheds, and is well contrived for making and saving manure. His young cattle are not pastured but soiled. They are fed in the sheds and yard, mostly with mowed grass, and are allowed the run of a small shady lot. They are in good order, and appear healthy and thrifty.

We saw here a superior machine for cleaning walks, invented by Mr. Donaldson. Its general form, is that of the frame of a wheel-barrow. Two bars of iron, representing the legs, reach down to the ground, and attached to the bottom of them is a transverse bar of steel, about two and a half inches wide, one edge of which is made sharp. Three or four inches of the lower end of the upright bars are also made sharp, in order to cut the sides of the walk. The handles are held by a man, and the machine is drawn by a horse. A space three-and-a-half feet wide is shaved at once, the man at the handles regulating the working of the implement so as effectually to cut up the weeds and grass. It is to be recommended for its simplicity and efficiency.*

NEW-YORK STATE AGRICULTURAL FAIR.

At a meeting of the Executive Committee of the State Agricultural Society was held at Bagg's Hotel, Utica, on the 10th July—present:

B. P. JOHNSON, President.

H. W. Doolittle, Herkimer; E. P. Prentice, Albany; H. S. Randall, Cortland, Vice Presidents. L. Tucker, Rec. Secretary, D. Lee, Cor. Secretary. George Vail, Troy; T. S. Faxton, Utica; Maj. Kirby, Brownville; J. M. Sherwood, Auburn; George Geddes, Onondaga, Managers.

The President of the Oneida County Agricultural Society, E. Comstock, and a number of the officers and members of that Society were present at the meeting.

Letters were read from Hon. Henry Clay, of Kentucky; Gov. Lincoln, of Massachusetts; and Messrs. Alex. Walsh, of Lansingburgh; Thos. Hillhouse, Albany; F. Knight, Publisher of Washington's Letters on Agriculture; and A. L. Fish, of Herkimer.

The following gentlemen were appointed a Committee of Arrangements for the Fair:

B. P. Johnson, Rome; Alex. Walsh, Lansingburgh; J. M. Sherwood, Auburn; George Geddes, Tyler, Onondaga co.; Luther Tucker, Albany; E. Comstock, Rome; T. S. Faxton, Utica; Spencer Kellogg, Utica.

The following gentlemen were appointed a Committee to confer with the railroad and boat companies, in relation to the transportation of stock and articles designed for exhibition:

J. M. Sherwood, Auburn; Horatio Seymour, Utica; M. D. Burnet, Syracuse; L. B. Langworthy, Rochester; Lewis F. Allen, Buffalo; George Vail, Troy; Thos. Hillhouse, Albany.

The following gentlemen were appointed a Committee on Finance:

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* For a larger cut of this cottage, see the review of Mr. Downing's work in the Cultivator for March last.

* For a correct drawing of this machine, see Appendix to Downing's Landscape Gradening and Rural Architecture.

The President, Messrs. J. S. Wadsworth, E. P. Prentice, Thos. Hillhouse, Geo. Vail, L. Tucker, and Geo. Geddes.

The Judges for the Fair were appointed, and the list will be published as soon as it shall be ascertained from the gentlemen appointed that they will serve.

The following additional premiums are to be given:

For the best corn and cob crusher, to be operated by horse power, $10.

For the best grade yearling heifer, $5.
" 2d " " Colman's Tour.
" 3d " " vol Transactions.
" best heifer calf, Colman's Tour.
" " native yearling heifer, $5.
" 2d " " " Colman's Tour.
" 3d " " " vol Transactions.
" " native heifer calf, Colman's Tour.
" " samples, (not less than three cheeses from each of 10 dairies in any one county,) $20; 2d best $10, 3d best, $5.

Mr. Geddes read a letter from Mr. F. Cooper, of Camillus, detailing a course of experiments on steeping seed corn, upon which a resolution was passed requesting Mr. Cooper to furnish the State Society with a report of his experiments when completed.

The Committee of Arrangements were directed to procure one large tent, and such number of small ones as they might deem advisable for the show grounds.

Dr. Lee, reported that he had been engaged between two and three weeks in delivering lectures in pursuance of his appointment by the Board, during which time he had visited the counties of Erie, Niagara, Monroe, Wyoming, Livingston and Oneida.

A Committee on behalf of the citizens of Utica, of which his Honor, E. A. Wetmore, Mayor of the city, was Chairman, waited upon the Executive Committee of the State Society. The several locations for the show grounds, which had been selected as proper places for the exhibition, were examined by the officers of the State Society, and they decided that the grounds on Mr. Thorn's farm, on the New Hartford Turnpike, was, upon the whole, best adapted for the exhibition of the Society, and the accommodation of the owners of stock who may attend.

The spirit manifested by the citizens of Utica, was most gratifying to the officers of the society, and gives assurance that every thing desirable to make the approaching Fair one of the most splendid exhibitions ever witnessed in this state, will be done so far as the citizens of Utica are concerned.

We will not for a moment doubt that the farmers of Oneida and of the adjoining counties, will present an exhibition of their stock, dairies and domestic manufactures, and worthy, not only of Central New-York, but of the Empire State.

The additional premiums offered for samples of the best 10 dairies in any one county, it is believed will secure an exhibition from the best dairy counties, more extensive than has ever before been seen at the Fairs of the Society.

Persons desirous of becoming members of the Society, and of competing for the premiums, are requested to enter their names at the stage office of J. Butterfield & Co., adjoining the National Hotel, Genesee st., Utica. The fees for membership are $1. Gentlemen may also become members on application to any of the officers of the Society.

NEW VARIETIES OF CORN.

Many of our readers may be familiar with the method which President Knight made use of to obtain new varieties of fruit by crossing previously existing sorts. The same means may be used to propagate new varieties of corn. Let the different kinds be planted in near proximity, as for instance in alternating rows, and they will intermix more or less freely. But this will be greatly facilitated by artificially removing parts of the flowers. It is well known that in order to render the ears fertile, that is, to cover the cob with grains, it is necessary that the pollen or fine dust from the staminate flowers which constitute *the tassels*, should impregnate the germ through the pistils or silk which covers the ears. To obtain a cross therefore, between two selected varieties, if we wish to transfer the grains of one to the cob of the other, let the latter be planted among the hills of the former, and then cut away the tassels, leaving the tassels or staminate flowers of the surrounding plants to impregnate the ears thus deprived of their own staminate flowers. Like most hybrids, the character of the new variety may not be developed until the second year.

Those who have different sorts favorably situated for such experiments, should be prepared to attend to them during the latter part of summer, taking care that impregnation has not already taken place before the staminate flowers are removed.

WESTERN NEW-YORK.

During the last month we had the pleasure of making a flying visit to several of our old friends in Western New-York. We were not a little gratified at the evidences we witnessed on every side, of the rapid progress which is making in rural improvement. These are to be seen in the increased attention paid to rural architecture—to the cultivation of fruits and gardens—to the cleaner and more thorough tillage of the farms—to the greater economy in the saving of manures, and in the general appearance of the farm buildings, fences, &c.

Col. Sherwood's Farming.

At Auburn, we spent a day with Col. J. M. Sherwood, who, three years since, purchased a farm of 300 acres, situated on the south side of Genesee-street, on the western border of this delightful village. This farm, though naturally of a good soil, had been so miserably managed by its former owner, who occupied it more than thirty years, that wheat could no longer be grown upon it, and other crops scarcely paid the expenses of cultivation—the fences and buildings worthless.

Col. Sherwood, having made his plans, located his buildings, fences, &c., proceeded, with the energy which so strongly marks his character, to the work of improvement, which, if we are not greatly mistaken, will soon make this worn-out farm one of the most beautiful and profitable in Western New-York. It lies in a compact body, with a slight ridge running nearly through the centre from north to south. A lane along this ridge divides the farm into two nearly equal parts—these parts are sub-divided into lots of about twenty acres each, with the exception of the two rear lots, which each consist of thirty acres. Having thus laid out his farm in the most convenient manner, every lot opening on to the lane, and enclosed it in the most substantial manner, with post and board fence, the next step was to prepare his fields for profitable tillage. Though draining had never been deemed necessary on this farm, he found more or less cold unproductive spots in almost every field, evidently caused by an excess of water. To remedy this evil, under drains were made, when a most thorough course of tillage was entered upon. The field was plowed as deep as it could be conveniently with the common plow, and this followed, so far as circumstances would admit, with the subsoil plow, loosening the soil six or eight inches deeper. Manures were then applied liberally, and the ground plowed and harrowed till thoroughly mellowed, and thus brought into the best possible condition for the reception of the seed. This course was pursued with each successive field brought under the plow, until he has now over 120 acres under cultivation, viz: 35 acres in wheat; 20 acres oats; 20 acres barley; 10 acres corn; potatoes and peas 5 acres each; 7 acres in carrots, ruta bagas and sugar beets, and 20 acres fallow for wheat. Better crops we no where saw than on this worn out farm. The wheat crop last year averaged over thirty bushels to the acre, and promises to at least equal that amount this year. The grass lands, which he has seeded, will produce from 2 to 2½ tons per acre.

The same judgment which has directed the labor bestowed on the farm, is manifest in the selection of the implements with which it is worked, and the animals with which it is stocked.

The implements were all of the *best* kinds. Among those we noticed, were two of Ruggles, Nourse & Mason's Worcester, and two of Prouty & Co.'s Centre Draft Plows—the Worcester Subsoil plow—Bement's Cultivator, Langdon's Horse-hoe, and a new Cultivator, recently manufactured at Troy, with which he was much pleased.

His stock consists of about forty head of IMPROVED DURHAMS, selected from the best herds, and bred with great care, several of which have taken the highest prizes at the exhibitions of our State Agricultural Society, and others which, we venture to predict, will be found among the successful competitors at its next show. Of SHEEP, he has about 60 pure bred South Downs, whose fleeces averaged this year 3½ lbs., and about 100 Merinos, or grades of Saxons and Merinos, whose fleeces averaged 3 lbs. 14 oz. One of his stock bucks, procured of Mr. Blaksley of Connecticut last autumn, sheared 8¼ lbs. of well washed and very superior wool, samples of which, and other fleeces from his flock, may be seen at our office. His SWINE, with the exception of a pair of Leicesters, consists of Berkshires, and in his POULTRY YARD, we found the Dorkings and Polands.

The buildings are in keeping with the other improvements. The barns and sheds surround the yard, and are admirably arranged and substantially built, with small lots on the west side reserved for single animals, calves—or for any purpose for which they may be wanted.

In building his residence, Col. S. adopted a plan admirably fitted for its purpose, both by its elegance and convenience of arrangement. It is a beautiful cottage in the pointed style, showing to great advantage from every point in which it is viewed. We shall not at present attempt a description of it, as we hope in some future number to present our readers with an engraved view of it, together with the plans of the floors, &c. This tasteful and commodious house, we venture to say cost less money than many of the less sightly but more pretending houses which are frequently seen in various parts of our country. Now that such works as Downing's Landscape Gardening and Cottage Architecture, are becoming more generally known, we shall doubtless soon see a decided improvement in our rural architecture—a consummation most devoutly to be desired.

We have seldom seen a farm more favorably situated for improvement, and as seldom have we seen one, in all respects, so thoroughly and judiciously managed. Col. S. has not been sparing of his outlay, though his expenditures have been directed with judgment and a strict regard to *profit*. It is obvious that in effecting so great an improvement in so short a time, a proportionate immediate income is not to be expected; but we feel perfectly satisfied that he will have no occasion to complain of the unproductiveness of his investment.

At Rochester, we saw a beautiful specimen of rural architecture in the Gothic cottage, just erected by T. H. HYATT, Esq., on his farm at Elmwood, a view and plans of which we have now in the hands of the engraver.

FINE SEEDLING STRAWBERRY.

While visiting our friend JOHN J. THOMAS, at Macedon, he proposed a visit to Palmyra, for the purpose of examining a bed of seedling Alpine Strawberries in the garden of Col. J. S. STODDARD of that place. Col. S. has directed much of his attention for several years past to the cultivation of the strawberry. Some years ago, he raised about 2000 new seedlings from the Alpine variety; one of which, a red variety, he selected and has since increased, which he regarded as the finest of the whole. The ground now occupied by this seedling is about 60 feet square, the plants standing in hills fourteen inches apart. We never witnessed so fine a display of fruit. The Alpine strawberries usually bear their fruit above the leaves; and in this case the masses of red berries presented so brilliant a glow as to be conspicuous at several rods distance. We measured some of the fruit of this variety which was one inch and a fifth long, and more than three quarters of an inch thick. Many specimens were about this size. The ground on which they grow is good garden soil, not rendered unusually rich by manure.

Col. Stoddard estimates that he will be able to pick from this plantation of sixty feet square, thirty-five bushels before the strawberry season is over. From this and another smaller bed he has taken two bushels of the finest fruit daily, and he thinks he will continue to gather that amount daily till the first of August, when he proposes to remove his plants for the purpose of increasing them. He sells them at $4,00 per bushel, or twelve and a half cents a quart, about one half the usual price of fruit of that quality in our cities. He suffers the fruit to remain on the stalk longer than usual, or until of a dark mahogany color. One person, with diligence, is able to pick two bushels in half a day.

This plantation was set out in the early part of last August, and now the plants completely cover the surface of the ground, which is kept clean and well cultivated.

Col. Stoddard showed us some young seedlings, obtained from seed planted last summer, and transplanted this spring. They were very small, the leaves being scarcely more than the quarter of an inch in diameter; and young experimenters would probably be discouraged at the outset, were they not to know the small size to be expected in young seedlings.

CROPS IN THE WESTERN PART OF THE STATE.

The wheat crop, although seriously affected by the cold weather of early spring, and the subsequent severe drouth, has lately improved to a remarkable degree, and a good crop is now promised. In the counties of Monroe, Wayne, and Ontario, the product will undoubtedly equal the average; and in other adjoining counties there is a very fair prospect. It not unfrequently happens that unfavorable weather in spring is followed by the reverse in early summer; and early predictions of the result have consequently often proved erroneous. A small portion of the present crop appears to be injured by the Hessian fly; and the worm in the grain has been discovered, but it is believed its ravages will not be extensive. No appearance of rust has yet presented.

The corn crop was kept back by the unusually cold weather late in spring and early in summer, and some early plantings were destroyed by the frost. Most fields, however, are now assuming a fine appearance, and with the usual warm weather which is to succeed, little fear need be entertained for a good return.

The exceptions to success in these two important crops are, as a matter of course, on such lands as have been hard run with tillage without manure. In such cases the corn presents a small and sickly appearance; and wheat is small and thin, and chess, grass, and other weeds have thus been permitted to have free growth and to obtain the ascendancy.

The hay crop is light; probably not more than two-thirds of the usual product will be afforded. Those farmers who have made provision for crops of corn-stalk fodder by thick sowing, and for a full supply of roots, will probably escape the inconvenience, and in some cases the evident disaster which will result from a deficiency of food for cattle.

THE FRUIT CROP.

This year there is an extraordinary failure of fruit. The severe frosts of the latter part of spring, have cut off most of the crop in the central and western portions of the state. There will be a small crop of apples, perhaps not half the average, west of Cayuga; but from that county eastward, the crop appears to be nearly or entirely lost. The peach crop has been much thinned in the western counties; near the south shore of Lake Ontario, and in other favorable positions, there is however a fair promise. Cherries, strawberries, and even currants, have been also seriously injured, and the amount lessened. With the exception of a strip of land a few miles wide, bordering the south shore of Lake Erie, there appears to be a total loss throughout Ohio.

IMPROVING COARSE HAY.

It often happens that farmers have certain wet portions of their meadows occupied with coarse grass and weeds, which are cut after the rest of their hay is made and secured. It is of course only second or third rate in quality, and is intended for the hardiest class of cattle. I can be rendered very palatable, however, by a free application of salt, in frequent and successive layers as it is deposited in the stack or mow; the amount of which may vary from a peck to a half bushel of salt to a ton of hay. Coarse hay, thus prepared, is frequently preferred by cattle to fine hay not so prepared.

All hay should receive an application of salt when stacked or stored away, as the salt not only preserves it from injury in keeping, but domestic animals, which are frequently much neglected in salting in winter, thus obtain a constant and regular supply, administered to them in the best possible form.

DEATH OF DR. AKERLY.

Soon after the publication of our last number, we received the painful intelligence of the death of Dr. SAMUEL AKERLY, well known through the medium of our columns for several years under the names of "*Richmond*," and "*A Practical Farmer.*" He died at his residence on Staten Island, Sunday, July 6th. By this sad event we, in common with the readers of the Cultivator, have been deprived of a most valuable co-laborer in the field of agricultural improvement, and the community generally have suffered the loss of an estimable and highly useful citizen. Like his eminent brethren, Fessenden, Buel, and Gaylord, he was called away suddenly—having been in his accustomed state of health only twenty-four hours before his death. He was a learned and talented, as well as benevolent and philanthropic man; and his death will be sincerely lamented by numerous personal friends, and also by a wider circle to whom he had become known through the public press. We find in the New-York *Commercial Advertiser* a short notice of his life and labors, from which we give the following interesting extract:

"Doctor Akerly was born in this city, was a graduate of Columbia College, and having inherited from his father ample pecuniary means, he received the best medical education this country could furnish, under the superintendence of his distinguished brother-in-law, the late Doctor Samuel L. Mitchell. His habits of application and study, in the commencement of his professional life, brought on a disease which was the source of great annoyance through many years, and at length terminated his life at the age of sixty years. He has been a large contributor to medical and scientific journals—was for several years a member of the common council. During the late war between this country and Great Britain he was hospital surgeon—was mainly instrumental in getting up and sustaining, through the first years of its existence, the Institution for the Deaf and Dumb, and was the second president of that institution. He was, in like manner, instrumental in procuring the passage of the act of incorporation of the Institution for the Blind, of which he was the first president.

"A few years ago the state of his health compelled him to leave the city, and he established himself on a farm on the south side of Staten Island, where for several years, and to the day of his death, he devoted himself to agricultural pursuits with great ardor. He has given to the world during his retirement, through agricultural journals, many of the results of his observation and experience in his new pursuit.

"He has also been enabled, during that retirement, to prepare, or rather to complete, a full biography of his friend and relative, Doctor Mitchell. We have learned that the work was nearly ready for the press, and we presume that it will soon be published under the direction of his representatives."

PRESERVING EGGS.

Many receipts are given for preserving eggs, all strongly recommended, and many of them failing on trial. They may be successful in one case, but varying circumstances may cause a different result. For instance, lime water may be very successful when of the right degree of strength or causticity; but skill appears to be required in managing properly such preparations. Some have been very successful by packing them in salt, plaster of Paris, and other pulverulent substances, with different degrees of success. But the main point appears to be to pack them in some soft or powdery substances, with the *small end downwards*, in an exactly perpendicular position, and so embedded that they shall never touch each other. Provided these requisites are strictly attended to, it does not appear to be very important what they are packed in; we have been uniformly successful in the use of *salt*, never failing in keeping them for a year, and a neighbor in one case kept them three years in a perfectly sound state.

STATE OF THE CROPS.

We have received a letter from Col. A. McDONALD, of Eufalla, Ala., dated Edgar county, Illinois, July 9. Mr. McD. is on a tour through the western states, and may, as he intimates, continue his journey to this state, and visit the show of our State Society, at Utica, where it will give us pleasure to meet him. He informs us that he left Eufalla on the 4th of June, that through all that portion of Alabama which he travelled, (a distance of 100 miles,) the crops were suffering much for want of rain. The corn crop in the richest sections, however, looked well. From all the information he could gather, the cotton crop would probably be a short one. In reference to Illinois and Indiana, he writes:—

"We have now travelled 130 miles in these states—the soil we find immensely rich—particularly in the valley of the Wabash. Here we travelled one hundred miles over the richest country in point of soil, I have ever seen. I thought by far a better farming country than middle Tennessee, that I examined last year; as the Wabash lands are not only rich but so level that we travelled sixty miles in this rich valley of lands, on almost a perfect level—passing over extensive prairies of the finest soil. On these extensive prairies we find large crops of wheat and corn. The report is that from forty to fifty bushels of corn to the acre is common, and that from twenty to thirty bushels of wheat per acre are here produced. I found the corn generally planted 4 feet each way, and 4 stalks in a hill. Owing to the immense quantity of rain that has fallen in the month of June, the wheat crop, it is thought, is somewhat injured. The corn crop is also injured in some places. It has been impossible to plow the fields here for the last three weeks."

We have also a letter from Dr. N. B. CLOUD, of Macon co., Ala., dated June 19th. He informs us that the cold continued very late—frost having occurred south of 33 degrees, on the 17th of May. The cotton plant suffered not only from the cold and drouth, but from *lice*—(aphides.)

"The cotton crop," he states, "is not so forward as the last, yet the warm weather having set in with the present month, and showery weather for the last 10 or 12 days, the crop improves astonishingly. The stalk is not as tall as usual at this period, yet it is well formed and exceedingly promising. I counted on the 15th, upward of 100 blooms and squares on one stalk.

"The corn crop never promised finer in this section—the spring has just suited it—the great body of the crop has been in silk and tassel since the 1st of June, and the later corn looks equally well. I have seen but little of the crop in the prairies, but what I have seen promises fair, both corn and cotton, and I have been informed that their prospects have seldom been finer.

"The oat crop is fully fine through this immediate neighborhood, and with our present prospects, after the drouth of spring, (which, upon the whole, is favorable,) the rains having set in, I think the crop will prove, at least, a fair one."

Our correspondent, SOLON ROBINSON, writes from Vincennes, Ia., July 6:

"Wheat was a pretty fine crop here, but there has been such a perfect deluge of rains that many fields are totally ruined in the shock; while in the northern part of the state we suffer with the drouth to that degree that wheat headed out not more than knee high in many places. The grain is good, but the quantity will not be large. Other crops are much injured there by drouth, while here, the drouth first injured crops, particularly corn upon the clayey lands, and now it is completely drowned. Upon some of the Wabash sandy bottom lands, the corn is fine; I saw many fields as I came along, where it was higher than my head."

M. DAVIS, Jr., Esq., Lynchburgh, Va., under date of July 11, states that vegetation was there suffering from a drouth of long continuance. The tobacco and corn of last year, were on some plantations a good deal injured, and there has not, he says, been rain enough since. The winter was uncommonly mild—in February, the wheat fields and grass lands had the appearance they commonly have in May. Cold weather recurred in March, and frosts followed at different times up to 1st June, "the result of all which is," says Mr. D., "we have literally *no* fruit, many garden vegetables failed, no clover hay, grass meadows very light, many oat fields not worth cutting, the pastures dried up, and the corn suffering; though if we have rain soon, we may have a tolerable crop of the latter. The wheat crop forms our only bright spot."

A letter from South Carolina, of the date July 11, states that the corn-crop "through the whole upper part of the state, is cut off perhaps one-half, by the unprecedented drouth." Our correspondent adds, "while I write, however, we are having a refreshing shower, and I hope we may yet do better with our late corn than we anticipated. Our wheat has been very good."

L. P., of Pa., informs us that there was a frost on the sixth of May which totally destroyed much of the wheat in Chester, Lancaster, and large portions of Montgomery and Delaware counties. The prospect there for corn and potatoes was said to be good on the 7th July. Oats short and thin, estimated at about half a crop, owing to drouth.

In a tour through a portion of Connecticut and Massachusetts, last month, we found the hay crop much lighter than usual, owing to drouth. Rye, which is cultivated quite extensively, is middling. Wheat is not largely cultivated; but the few fields we met with were very good—the straw beautifully bright and the berry plump. This was particularly the case in the valley of Connecticut river, where wheat has latterly been considerably introduced—it following tobacco, (a staple crop there,) with good success. Apples and pears are not as promising as usual—cherries were plenty. Corn was rather backward, but the late extreme heat, where it has not suffered too much from drouth, has been favorable for it.

HAY CROP IN ORANGE COUNTY.—A letter from Newburgh, dated July 2d, states that in consequence of the extraordinary drouth, and the total want of a heavy rain since April, that the hay crop will not average more than one-third, or according to the estimate of some, one quarter of the usual crop. Another correspondent from the interior of the county, considers the hay crop as insufficient to winter half the cattle of the farmers.

From various letters, we give the following summary:

Rochester, July 18.—Hay is not more than half a crop. Corn looks well, except where damaged by the wire worm, which in some cases has lessened the crop one third. Wheat never looked better—we saw in a three days tour, probably 20,000 acres, several fields of which will yield 40 bs. pr. acre. Potatoes and oats generally promising. T. H. HYATT.

Canandaigua, July 18.—Wheat an average. Barley best ever known here. Hay on old meadows very light. Corn, potatoes, and oats pinched by drouth, but if rain comes soon, may be good crops. Weather hot—mercury 82 to 100 degrees. OLIVER PHELPS.

Elbridge, July 22.—Crops generally good, except hay —not much more than half a crop of that. Wheat good —barley and oats promising. S. M. BROWN.

Syracuse, July 22.—Wheat is injured by rust, and in some cases will yield one half less than appearances four weeks since indicated. Barley and oats good. Corn backward. Grass light. Weather hot and dry till Sunday night, when we had two heavy showers.

E. MARKS.

TO PREVENT VERMIN ON POULTRY.—Scatter slacked lime on the perches and floors of the hen house, as often as once in ten days. It will effectually eradicate the lice and promote the health of the fowl. S. BARROWS.

FOREIGN INTELLIGENCE.

By the Britannia we have our foreign exchan[illegible] to June 2. The prospect for crops in Great Britain was on the whole favorable. It was thought there would be a fair average yield of wheat. "Barley," it is said, "is in every point of view a promising crop, and where oats are grown they are also well spoken of; whilst beans and peas wear as healthy and vigorous an appearance in all parts of the kingdom as could possibly be desired. In addition to the generally auspicious promise of the grain crops, farmers have also reason to be well satisfied with their produce of hay." The weather during June was uncommonly warm.

Considerable sensation had been occasioned in consequence of sentiments expressed by Sir Robert Peel and Sir James Graham, favoring a total repeal of the corn laws. Of the policy of Sir Robert Peel, it is said—"his plan evidently is to make periodical changes, all in favor of the manufacturers and prejudicial to the farmers, and it is now abundantly evident that the occupiers of the soil have nothing to expect from the present ministry."

The wool trade was brisk, at fair prices, both in Great Britain and on the continent.

The *hop trade* was rather dull. It is observed—"The accounts from the plantations are exceedingly favorable on the average, and this checks business." Prices are given as from 7*l*. to 9*l*. per cwt.

AGRICULTURAL COLLEGE AT CIRENCESTER.—This institution, it is expected, will go into operation in the course of the year. Prince Albert has become a Patron, and is also one of the governors of the college.

THE BAKEWELL LONG HORNED CATTLE.—A writer in the *Farmers' Journal* states, that in a late tour through the midland counties, he found to his great surprise, some extraordinary fine cattle of the once famous Bakewell or Dishley breed. Some of the best were at Mr. Twycross's, near Canby, the place where Mr. Bakewell obtained his two first celebrated breeding heifers. A fine herd of them are also spoken of as belonging to Hon. Mr. Nugent, of Hingham, Leicestershire. Six of these were to be exhibited at the great Shrewsbury show in July. The writer says—"My friend with me was struck with amazement to see long-horned cattle which had been said to be nearly extinct, so good and so heavy, with such fine, firm, thick flesh, good symmetry, strong constitutions, and at early maturity."

THE EXHIBITION OF DOMESTIC POULTRY, under the auspices of the ZOOLOGICAL SOCIETY, closed at Regent's Park on the 14th of June. The show appears not to have quite equalled anticipations. The first prize for Dorking fowls was awarded to Rev. G. C. Gillett. Prizes were also given for fowls of the Surrey, Old Sussex, Hamburgh, Black Spanish, Polish, Chinese, Malay, and several varieties of the Bantam breed. Also for ducks, geese, turkeys, pheasants, and pigeons. The black Spanish fowls are spoken of as of large size and very beautiful. The gold and silver spangled Bantams—a breed which originated with Sir John Sebright—are said to have formed decidedly the most beautiful part of the exhibition. The white Aylesburg ducks are said to have been very large.

CURING BACON—¾ lb. of bay salt, ½ lb. of saltpetre, 1 lb. of coarse sugar, and about 1 lb. of common salt. This is sufficient for the bacon and faces of a hog of 10 or 11 score. Pickle all together, and let it remain in the pickle a month, turning and rubbing it all every day. The flavor of bacon depends quite as much upon its being properly smoked and kept after it is made, as it does upon the curing.

CHINESE GRASS.—During the past week, Messrs. Hargreave and Brothers, flax spinners and power-loom linen manufacturers, of this town, called at our office and exhibited a sample of Chinese grass. This article is represented as possessing all the qualities of flax, but in a higher degree than any other known to our spinners or manufacturers—surpassing the best qualities in strength, fineness, and length of staple. These gentlemen also showed us a sample of fine linen manufactured by them from this article, which greatly resembled French cambric, but with a more silky appearance. It would appear that the Chinese grass can be supplied in unlimited quantity, and if that should be the case it must be a subject for congratulation that an article of such large consumption in this country should be presenting itself as another exchangeable commodity for our manufacturers, the rapidly extending consumption of which throughout China seems to be limited only by the means which they possess of making a suitable return for them.—*Leeds Mercury.*

WINTER GRAIN—STEEPS FOR SEED.

We should be in favor of sowing rye as early in September as practicable; and where there is no danger to be feared from the fly, we would observe the same rule in regard to wheat. There is a particular reason for early sowing rye this season, and that is the advantage it will afford for feed to sheep and young stock. The dry weather has lessened the hay-crop to a great extent, and the supply of grass in pastures must in many cases be very small. Rye, if allowed to get good root, may be pastured with light stock in the fall, and to some extent during winter. In some cases it may even be expedient to feed in spring. The diminution which results to the yield of grain is not equivalent to the advantages as pasture. The crop starts very early, and is particularly adapted to the dry lands on which the grass has suffered most. Would it not be judicious to sow this crop largely, to be used this fall and next spring as a substitute for hay and grass? In passing through the country, we notice in the barn-yards, and around the barns, or sometimes by the road-side, considerable piles of manure, exposed to waste by evaporation and washing of rains. If some of the fields where the grass is dried up were plowed, and all the manure now lying useless, was carefully collected and applied to them, a large amount of feed might be produced, which would be available before much grass would be had next season.

In the preparation of ground for winter grain, either wheat or rye, we doubt the propriety of bringing to the surface, the sward, and vegetable matter which had been buried but a few weeks before; especially where the soil is sufficiently porous and loose. Some tool should be used which will sufficiently mellow the soil, without reversing the furrows. A cultivator, if rightly constructed, and worked at first mostly lengthwise of the furrows, is found to answer a good purpose.

The preparation of the seed is an important matter. The cleanest and heaviest should be sown. If it contain seeds of pernicious plants, they should be taken out. It will amply pay to pick over by hand a peck or half bushel of wheat, or other grain, to be sown on a spot of good clean ground, purposely for seed. Chess, oats, and other seeds, lighter than wheat kernels, may be principally taken out by putting the grain in strong brine, a small quantity at a time, and stirring it with a stick. The foul seeds will rise, and may be skimmed off. When it has been finished, it may be put on a floor and dried off, or rendered fit for sowing, by mixing with it air slacked lime or plaster. Passing the grain slowly through a good winnowing mill, will clean it from nearly all the small seeds, such as wild pink, wild mustard, and seeds of most weeds, as well as the most shrivelled and imperfect kernels.

The various kinds of *smut* in grain have been well ascertained to be vegetable parasites of the fungi tribe. The species known as *Uredo fœtidæ*, commonly called "dust, or pepper brand," is the most injurious to wheat. Its seeds are so minute that they are believed to be taken in by the spungioles of the plant, and are with the sap carried up the pores into the cavity of the embryo kernel, where the fungus reproduces itself; causing an abortion of the grain, and giving in its place a black dust of most pungent and disagreeable odor and taste.

There is no longer any doubt that this substance may be eradicated from wheat by means of certain substances applied to the seed. So often has this been proved by actual experiment, that we "hold him no longer guiltless," who neglects the application of the remedy. The vegetative power of the fungus may be killed by lime, ashes, brine, solutions of arsenic, vitriol, &c. We have tried nearly all these substances, and give the preference to vitriol. Our mode of using it has been as follows: Dissolve in hot water two ounces of blue vitriol, (sulphate of copper,) for each bushel of wheat; add as much water as is necessary to cover the grain, stirring the solution well. Soak the wheat two or three hours, and dry it with plaster before sowing.

In regard to *fertilizing* steeps, we do not know that we can add anything to the suggestions given in our May No., page 158, to which we would refer those wishing to make experiments of this kind.

NEW PERIODICAL.

THE FARMER'S LIBRARY AND MONTHLY JOURNAL OF AGRICULTURE. Edited by JOHN S. SKINNER. Greeley and M'Elrath, publishers, Tribune Buildings, New-York—100 pages, monthly, at $5 per annum.

We hail with pleasure the re-appearance of Mr. SKINNER in the editorial chair, and congratulate him as well as the public upon the favorable circumstances under which he again makes his bow to the friends of Agriculture, with all the vigor and enthusiasm of youth. He is most fortunate in securing such men as Greeley & M'Elrath for his publishers, as their well known enterprize and industry afford abundant assurance that the work over which he presides, will be issued in the best style, and take its place among the permanent publications of the day—an assurance highly necessary to the success of a work of this character.

We are much pleased with the plan of THE FARMER'S LIBRARY. Each number consists of two parts, one of which is to be devoted to the re-publication of new and valuable works on Agriculture—the other to constitute the Journal of Agriculture. The first part of the present number is occupied with a re-publication of Petzholdt's "Lectures to Farmers on Agricultural Chemistry," a work issued the last year in London, and which has been highly commended by the foreign agricultural press, but which we have as yet had no opportunity of examining.

The Monthly Journal opens with an appropriate and interesting biographical notice of the late Hon. STEPHEN VAN RENSSELAER, of this city, whose labors in behalf of agriculture are well known, accompanied by a well executed portrait on steel. This department shows that our friend Skinner has lost none of his enthusiasm for the cause, or ability to manage a journal of this description. Sixteen chapters are devoted to the consideration of various subjects, such as Deep Plowing—The Value and Progress of Agricultural Science—Claims of Agriculture on the Business Community—Southern Agriculture, &c., together with several pages of miscellaneous matters. A lithographic print is given of three of Mr. Gratham's prize South Down wethers, and another of the Silk Plant (apparently a species of "milk-weed,") from Tripoli.

GRAPE-VINES ATTACKED BY ROSE-BUGS.

In our answer in the July No., to an inquiry on this subject, we stated that we had not before heard of this insect having attacked grape-vines. Our attention has been recalled to the subject by a letter from "H. W. S. C.," of Oatlands, near Burlington, N. J. He remarks that his vines suffered from this cause some years since, and refers to a remedy given by Dr. Underhill, in the Cultivator, vol. 9, page 199, which we had overlooked. The remedy recommended by Dr. U., was to go over the vines every morning, and brush the bugs into cups containing water. H. W. S. C. thinks he has "found out a readier way to kill them. He takes a lillte spirits of turpentine, instead of water, in the cup, which he says saves the necessity of treading on them, as it kills them instantly. "The next season," he observes, "after having practiced this mode, there were certainly not half as many insects as the first, and this year there has been comparatively none, and my vines are now loaded with fruit, with scarce a berry injured by the rose-bugs. The fact stated by Dr. Underhill, that the rose-bugs breed in the ground, is clearly demonstrated by the following fact: I was last summer preparing a heap of compost near my grape vines, which in the fall was put into a green-house in which I was planting foreign grape vines. Early in May I was surprised to find rose-bugs on the young vines in the green-house. I immediately destroyed them, but they kept increasing for several days, though none were seen out of doors for full three weeks afterwards. The eggs, therefore, must have been laid in the compost heap the season before, and brought into the green-house with it, where the heat hatched them thus much sooner than their existence would have commenced in the open air."

THE CULTIVATOR ALMANAC FOR 1846.

This work, with Astronomical calculations for Boston, New-York, Baltimore, and Charleston, has just been issued. It is got up in a uniform style with the previous years, beautifully illustrated with a great variety of engravings, and contains much useful matter on gardening and farming, which we should be glad to see generally circulated throughout the country. Editions will be printed for Booksellers and Merchants, with the privilege of occupying the last page with advertisements, at $15.00 per 1000. Address the publisher of this paper.

☞ The Cultivator Almanac can now be obtained of M. H. Newman, 199 Broadway, and A. L. Halstead & Son, No. 7, Platt-street, New-York—Armstrong & Berry, booksellers, Baltimore—Wm. H. Moore & Co., booksellers, Cincinnati—D. Baker & Co., booksellers, 80 Camp-street, New-Orleans—Wm. Alling, bookseller, Rochester, and T. Morehead, Jr., Erie, Pa.

NARRATIVE OF THE UNITED STATES EXPLORING EXPEDITION.

All the volumes of this work, five in number, have been received. We have before spoken of the two first volumes—to the others we have not given the attention requisite to enable us to give a particular notice of their contents. The narrative appears to detail with all necessary minuteness every important incident, from the sailing of the squadron in 1838, to its arrival in New-York in 1842. In the fourth volume, which we have just been looking over, we find some interesting remarks relative to Oregon, a portion of which territory was examined by Captain Wilkes and some of his officers with considerable attention. A visit was made to Vancouver, a post on the Columbia river, occupied by a branch of the Hudson Bay Fur Company. Here considerable progress has been made in farming and in horticulture—a garden almost vieing with the Chiswick gardens of the Duke of Devonshire, belongs to the post, under the direction of Dr. McLaughlin. "The farm at Vancouver," says Captain Wilkes, "is about nine miles square. On this they have two dairies, and milk upwards of one hundred cows. There are also two other dairies, situated on Wapauta island, on the Williamette, where they have one hundred and fifty cows, whose milk is employed, under the direction of imported dairymen, in making butter and cheese for the Russian settlement. They have likewise a grist and saw-mill, both well constructed, about six miles above Vancouver, on the Columbia river."

"The stock on the Vancouver farm is about three thousand head of cattle, two thousand five hundred sheep, and about three hundred brood mares. At the dairy we were regaled with most excellent milk, and found the whole establishment well managed by a Canadian and his wife. They churn in barrel churns, of which there are several. All the cattle look extremely well, and are rapidly increasing in numbers. The cows give milk at the age of eighteen months. Those of the California breed give a very small quantity of milk, but when crossed with those from the United States and England, do very well. I saw two very fine bulls that had been imported from England. The sheep have lambs twice a year; those of the California breed yield a very inferior kind of wool, which is inclined to be hairy near the hide, and much matted. This breed has been crossed with the Leicester and other breeds, which has much improved it. The fleeces of the mixed breed are very heavy, weighing generally eight pounds, and some as much as twelve. Merinos have been tried, but they are not found to thrive. The California horses are not equal to those raised in Oregon; those bred near Vallanwatta are in most repute."

Of the kinds, quality and yield of the grain and grass grown at Vancouver, Capt. W. gives the following account: "The wheat averaged sixty-three pounds to the bushel; barley yields twenty bushels to the acre; buckwheat, in some seasons, gives a good crop, but it is by no means certain, owing to early frost. Oats do not thrive well. Peas, beans and potatoes yield abundantly. Little or no hay is made, the cattle being able to feed all the year round on the natural hay, which they find very nutritious, and fatten upon it. The grass grows up rapidly in the beginning of summer, and the subsequent heat and drouth convert it into hay, in which the juices are preserved. Besides this, they have on the farms along the river two luxuriant growths of grass; the first in the spring, and the second after the overflowing of the river subsides, which is generally in July and August. The last crop lasts the remainder of the season. Neither do they [the stock] require shelter, although they are penned in at night. The pens are moveable; and the use of them is not only for security against the wolves, but to manure the ground."

DISEASE IN POTATOES.

From several sections we hear there are already symptoms of this disease. B. P. Johnson, Esq., of Rome, writes us, July 18th:—

"I have examined, within the last few days, a number of fields, and find indications of the disease in almost every field. The upper leaves first show indications of the disease—the leaves shrivel or curl up, and it soon extends to the entire stalk. In some instances when the potatoes have been dug, on cutting them open, a small black spot is found in the centre. In others the potatoe appears sound and healthy.

"The disease is not confined, so far as my observations extends, to any particular variety of potatoe, or to any special location. Seed procured from the west, where no defect was apparent last year, suffers equally with seed selected from the crop raised in this section last year. I planted some this year, and made a preparation of salt, plaster and house ashes, of nearly equal quantities, though of ashes the most, and put about a handful in each hill before covering. The vines look remarkably well, and as yet are free from the curl in the leaves. Whether they will escape, a few days will determine.

"I am led to believe, that this disease is somewhat analogous to smut in wheat. As it has made its appearance so early in the season, I hope careful observations will be made, in order if possible to aim at some definite conclusions in relation to the cause of the disease and remedy."

Dr. Camp, of Windham, Greene co., has sent us a couple of insects, of a kind which he thinks causes the rot in potatoes. He states that the blight which precedes the rot, has already attacked the crop, and that on all the affected stalks, he finds more or less of these insects. The healthy vines, he states, have no insects on them.

Col. H. S. Randall's Merino Sheep.—Last season we noticed the enormous clip of the Merino sheep of Col. Henry S. Randall, of this village. This season we learn that his Paular stock, including two rams, averaged over six pounds of *well washed* wool per head! A three year old ram sheared 13 lbs. 8 oz., (the heaviest fleece, we believe, ever taken from a *three* year old Merino in the U. S.,) and a yearling 8 lbs. 8 oz. Many of the ewes sheared 6, 7 and 8 lbs. per head, and one the unparalleled weight of 9 lbs. 1 oz.! Col. R. received the first premium on rams, and the first and second on ewes, at the State Fair at Poughkeepsie, (1844,) and the gold medal of the Society, for the best managed and most profitable flock of sheep, at the annual winter meeting of the Society in Albany. Cortland against the world!—*Cortland Democrat.*

NOTES ON VERMONT FARMING.

(Continued from page 221.)

CATTLE.—Much less attention is paid to the improvement of cattle in this section than to sheep. Several years since some cattle from Connecticut, whose blood has not been duly ascertained, were brought here and considerably improved the stock. Some Durhams have been introduced, and herds are frequently met with in which traces of this blood are to be seen. Mr. PARIS FLETCHER, of Bridport, has a bull showing some fine points, purchased of George Vail, Esq., of Troy, and got by his bull Duke of Wellington. Mr. F. showed us some good yearlings and calves by this bull. Mr. Cha's. L. Smith, of Bristol, has several cows showing more or less Durham blood. Among them is a large, strong-framed, and well-made cow, said to have been imported as a full blood Durham. Several of his cows have the appearance of being large milkers. Mr. Wightman Chapman, of Weybridge, has an Ayrshire bull, presented him by J. P. Cushing, Esq., of Massachusetts.* He is a good bull—has a small, clean head, and clean limbs, a well-shaped body, and mellow skin. With the exception of Mr. Archibald's bull sent to the Poughkeepsie show from Montreal, he is decidedly the best Ayrshire bull we have ever seen. We saw in the neighborhood several very fine heifers by this bull, which have just come to milk. Their appearance is very promising, and we have no doubt they will make superior cows. Indeed we have no doubt that this bull has qualities which would greatly improve the stock of the neighborhood for all purposes.

At Mr. HYDER BARNES's, in the town of Addison, we saw an uncommonly large ox. He is six years old, has as yet only been fed with hay and grass, and was at pasture in only good store trim. His girth at the chine, by our admeasurement, was eight feet six inches. In July last, (a year ago,) he weighed twenty-six hundred and twenty pounds. He is one of the largest oxen we ever saw in the same state of flesh, and if thoroughly fatted, would probably come nearly or quite up to the weight of any which have been slaughtered in this country. Though not *fine* his shape is better than that of such very large animals usually, and he may fatten well. His blood is not known. His color is a rather light red, with a white face, and narrow strip of white along the back.

We saw some good stock in the vicinity of Vergennes. Mr. Rodman Chapman introduced a bull here several years since, that we understood was bred by Colonel Jaques, of Massachusetts, which, from what we saw and heard, evidently much improved the stock. Mr. Chapman now has a cow by this bull, which is one of the best animals we saw in Vermont. Mr. C B. Cook, of Charlotte, has a young bull and two heifers, which appear to be nearly full blood Devons, purchased in Litchfield county, Ct. They are pretty animals, the bull particularly so.

It is a matter of no less surprise than regret, that farmers in general in this superior grazing section, should be so indifferent to the quality of their cattle. While they have become generally awakened to the improvement of their sheep, and have become possessed of a highly profitable variety, they seem not to be aware that equal advantages would accrue from a systematic and judicious cultivation of the breed of cattle. We will not attempt to say what particular breed would be best adapted to this location. We have no doubt the introduction of the best bulls of either the Durham, Hereford, Devon, or Ayrshire breeds, would be productive of improvement.

It may serve to correct an error, if we remark here that we were in some instances shown stock under the name of Durham, which were a *burlesque* on that celebrated breed. If certain blue-skinned, black-eyed, black-nosed, coarse-boned animals, are thought to be *Durhams*, we cannot wonder at the prejudice which appears to exist with some against the breed!

HORSES.—Vermont, in common with New-Hampshire, has been much celebrated for its excellent horses,—distinguished for the quality of activity, great strength in proportion to size, ability to live and labor on comparatively little food, with remarkable hardiness and endurance. We shall not attempt a minute history of the Vermont horse—this would be fruitless. He is undoubtedly a mixture of several breeds. The first settlers, who were principally from Massachusetts, Connecticut, and Rhode-Island, carried with them such stock as they had. Connecticut and Rhode Island were in possession of valuable horses at a period as far back as the commencement of the American revolution. The horse called *Ranger*,—asterwards known in Virginia as Lindsey's Arabian, said to have been an Arab, presented by the Emperor of Morocco to the commander of a British frigate, and by the latter subseqently given to the captain of an American vessel,—was brought to Connecticut, and became the sire of a numerous and very superior progeny. General Washington's celebrated grey charger, was said to have been got by this horse. The *Naragansetts* of Rhode Island, (so called from being bred in the vicinity of Naragansett bay,) were famous at as early a day as the horses of Connecticut. What those Narragansetts were, we know not—it has been said they sprung from an imported English Hunter.

It is reasonable to suppose that the early emigrants to Vermont, took with them mares of these stocks; and from the contiguity of the state to the province of Lower Canada, there has always been a greater or less infusion of the blood of the Canadian French horse, which came originally from Normandy. The stock thus derived has been variously commingled, and mixed also with other blood introduced at different times. The rugged features of the country, the rigor of the climate, the mode of feeding, and the general management, have all tended to produce a hardy race, as well as to assimilate them in some degree to a general standard of points.

But the greatest celebrity of the Vermont horses has been unquestionably derived from a particular animal commonly known as the "old Justin Morgan horse." This horse is, we believe. universally admitted to have been the root of the famous race, to which the name of Morgans has been given, though there has been some diverse accounts of his origin. The most authentic history yet obtained, and which, so far as it goes is undoubtedly entitled to full belief, is given by a son of Justin Morgan, bearing his father's name, and now living in Stockbridge, Vt., [see Cultivator vol. IX, p. 99.] Mr. Morgan states that his father removed to Randolph, Vt., from Springfield, Mass.,—that in the year 1795 he visited Springfield, and on his return to Randolph took with him a "two years old colt, which was the same that has since been known all over New England as the Morgan horse." Mr. Morgan does not state anything in regard to the blood of the colt, but is confident his father obtained him in the vicinity of Springfield. This statement of Justin Morgan 2d, is confirmed by John Morgan of Lima, N. Y., [Cult., vol. IX. p. 110,] who states he was a near neighbor of Justice Morgan senior, previous to his removal to Vermont. He recollects the colt purchased by Justin Morgan, which he states was got "by a horse owned by Sealy Norton, of East Hartford, Conn., called the 'True Britton.'" This horse was said to have been stolen from Gen. Delancy, commander of the refugee troops on Long Island, during the Revolutionary war. The Delancy horse is said to have been nearly or quite thorough bred. [Skinner's Introduction to Youatt's Treatise on the Horse, p. 54.]

This we believe comprises all that is positively known in regard to the blood of the *first Morgan horse*. His immediate descendants were numerous, and remarkable for their good qualities, and striking resemblance to each other. Indeed so remarkable was their similarity that they were readily recognized by ordinary observers. Even when crossed with the common country stock, their peculiarities were often obvious to the second and third generation. A horse called "Sherman Morgan," got by the "old Morgan," and owned by Mr. Bellows, of Bellows'-Falls, Vermont, is generally believed to have done more towards giving "character and fame" to the Morgan stock, than any other horse, not excepting the first of that race and name. This horse lived to a great age, and his progeny, which were very numerous, were of unrivalled excellence as *roadsters*. Of the blood of the Sherman Morgan on the side of his dam, we know nothing, but hope to obtain more particulars in future. In 1831 this horse was kept by Col. Sam'l Jaques, at the Ten Hills farm, Charlestown, Mass. Col. J. considered him a horse having a rare combination of valuable qualities.

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* For a cut and description of this bull, see eighth vol. Cultivator, p. 101.

Though we never had the good fortune to see the Sherman Morgan, we saw many of his foals, and without disparaging other horses, can safely say, that they were, as *road horses*, superior to any other stock with which we have been acquainted. It will be recollected that Mr. Hill's horse Black Hawk, spoken of in our June number, is a son of the Sherman Morgan.

Perhaps there is not at the present time in existence, a horse which possesses more of the characteristics for which the Morgans are justly esteemed, than Black Hawk. He is certainly a noble and beautiful animal, and we cannot but think well calculated to produce a highly valuable stock. We say this from *conviction*, and with no other motive whatever than a wish to benefit the public.

And here our Vermont friends will permit us to suggest, that, in order to secure as far as possible, the valuable properties for which their horses have heretofore obtained such extensive notoriety, an Association for the Improvement of the Breed, be at once organized. The congeniality of the soil and climate of Vermont to produce the best of horses for certain purposes, has been shown and acknowledged by the high estimation in which many of them have been held wherever known. And had so valuable a stock as the Morgans originated in England, or in any country where superior animals are properly valued and the principles of breeding duly regarded, there can be no question that a successful effort would have been made to prevent its deterioration. But what, it may be asked, has been done in this case? Instead of efforts to preserve and improve their peculiar stock, is it not a fact that the practice in general has been quite akin to that of the boy, who, according to the fable, "killed the goose which laid the golden egg?" In the anxiety to realize *immediate* profits, ultimate consequences have too often, it is feared, been overlooked; and the tempting offers of a hundred, or a hundred and fifty dollars, have too frequently induced the farmer to part with a valuable mare, apparently regardless of the fact that by doing so he was depriving himself of an important pecuniary resource. In this way much of the best breeding stock has been taken away from Vermont, and worn out in the stages-coaches and other carriages of other states, without being allowed to "increase and multiply." This has so far operated to lessen the number of good horses in the state, that there are not now, probably, as many as there were a few years ago. The object of such an assoiciation as is suggested, should be to secure the best mares and stallions for breeding—an object which beyond all doubt might be effected with advantage to the individuals engaged in it, and still greater advantage to the public. We trust that the obvious necessity of the case will induce some effective action among those farmers who are desirous that Vermont should maintain her pre-eminence for rearing valuable horses.

At Addison, we saw the horse *Eclipse*, owned by Mr. E. Long, Cambridge, N. Y., which received the first premium of the New-York State Agricultural Society in 1842. This horse, we believe, is a son of the celebrated American Eclipse. We should suppose him to be an animal well calculated to produce horses of large size, with fine form and spirit.

We were shown some mares of excellent points. Among the best were those of Mr. Y. G. Drake and Mr. Jewett, Weybridge, and Mr. Langdon, of New Haven.

Orchards, Fruits &c.—Though the winters of Vermont are long and cold, the hardier fruits, as the apple, pear, and plum, thrive well. We have never seen finer apples than we tasted at several places. Some Spitzenbergs shown us by Mr. H. S. Morse, Shelburne, were superior examples of that noted fruit. Plum-trees appear very flourishing in many places, and we were told produced abundantly.

In the garden of the Hon. Ezra Meech, Shelburne, we found vegetation more forward than it was generally in the gardens of this city and Troy at the same time. At this we were somewhat surprised, especially, as besides being more than a hundred miles farther north than Albany, it was located immediately on the verge of Lake Champlain, naturally exposed to the full sweep of the coldest winds. We soon discovered, however, that the garden was completely protected by a belt of white ceder—the American *Arbor vitæ*. This had so broken off the cold winds that the effect was equivalent to a transfer of the spot several degrees to the south. This is a striking example of the advantages of protection from cold by means of evergreens—a means which ought to be generally adopted in the northern states, and all bleak, exposed sections. Mr. Meach has a pretty conservatory, well filled with plants, which, together with the garden, appear to be well managed. We regretted that circumstances prevented our examining Mr. Meech's extensive farm. We understood him to say that he kept two thousand sheep, and two hundred cattle, &c.

Facilities for Manufacturing.—Few sections of the country can compare in this respect with those portions of Vermont through which we passed. The valley of the Otter-creek, especially, possesses an almost incalculable water-power, but a small portion of which, comparatively, is yet improved. In the space of eleven miles, from the commencement of the rapids above Middlebury-falls, to the foot of the falls at Vergennes, there is an aggregate fall of three hundred and ten feet. For a large portion of this distance, the banks of the stream are solid, affording numerous level and excellent sites for the erection of manufacturing buildings. Establishments for the manufacture of wool, and for other purposes, are now in operation at Middlebury, Weybridge, and Vergennes. We were informed that they all do a successful business, and it is believed that a further investment of capital might be extensively and profitably made here. We would invite the attention of manufacturing capitalists to these facilities.

FARM OF HENRY S. MORSE.

Among the fine farms we visited during our excursion to Vermont, we were not more pleased with any than with that of Mr. Henry S. Morse, situated in Shelburne, Chittenden county, about six miles from Burlington. It consists of one thousand acres, lying in a body. Its location is beautiful, being on a large swell, commanding a fine view of the lake and the interesting scenery on either side, for a wide extent.

Mr. Morse devotes his farm principally to keeping sheep, though he is under the necessity of keeping considerable other stock, (horses and cattle,) to carry on all his operations. Cattle are also sometimes fatted for market, but this branch has latterly been found less profitable than wool-growing. He has two thousand sheep, nearly all of which are of the Merino and Saxon blood. The whole flock averaged last year a fraction over three pounds per fleece. He pursues a very judicious course with his wethers. He always feeds them well, and at three and four years old they receive high feeding through the winter, are sheared as early as the season will permit, and sold soon after, to be driven to Brighton for slaughter. Mr. Morse had, when we were there, two hundred weathers which would be ready for sale as soon as they could be shorn, and were considered worth $2,50 per head. They were the best lot we ever saw of that breed—fat and large. They yielded on an average last year five and a half pounds of wool, worth forty cents per pound, or $2,20 each. He has also another lot, younger than these, which will be ready for sale next season. He raises peas and potatoes for feeding his sheep and other stock in winter. He is much in favor of the pea for sheep. The crop is mowed, properly cured, put in the barn and fed out to the fatting sheep in winter, without threshing. He finds this the most valuable crop he can raise for that purpose. The store-sheep are likewise fed with peas in small quantities.

The potatoe is well liked, in connection with other food, for sheep, and particularly for fatting cattle. The stock fatten well on it, and the beef is of good quality. The only objection to the potatoe, is the difficulty of feeding it in cold weather.

WASHING SHEEP.—Mr. Morse's plan for doing this is worthy of notice. A dam is thrown across a small, clear and rapid stream, near his barns. The bottom of the pond thus raised, is so covered with small stones that it is impossible to make the water muddy or sandy in the least. A platform is laid from which the sheep are taken into the water, and when their wool is cleaned, they pass out by a hard, McAdamized bank, to a clean grass-lot on the opposite side. Four men can work in the water at once, and two thousand sheep may be completely washed here in one day.

BARNS AND WINTER SHELTER.—Mr. Morse's barn and fixtures for winter sheltering and feeding, are well arranged. The yards are well protected from the coldest winds by sheds attached to the barns. In the sheds are racks and feeding boxes sufficient to accommodate the sheep in bad weather. In fair weather they are mostly fed out of doors. When the yards are covered with snow and are hard and clean, they are sometimes foddered on the snow. Water is brought in an aqueduct, and there are troughs in each yard through which the water is constantly running.

GRASS LANDS.—Mr. Morse mows about three hundred acres annually. The average yield of hay is one and a half to two tons per acre. He has one field of sixty acres, beautifully set in grass. He prefers plowing his meadows or grass lands as little as possible. The first object is to get them as level and smooth as possible, and the grass thick and even. When the sward becomes bound or the grass declining, manure is spread on in autumn, made fine and worked in with a bush or harrow. The ground is naturally moist, and the manure being put on at this season of the year is not wasted by evaporation. The fields show that the system answers well.

FENCING, DRAINING, &C.—A considerable part of Mr. Morse's farm, was naturally too wet. In the division of the farm by fences, he has had regard to remedying this defect. Trenches have been dug to the depth of two or three feet, (according to the nature of the ground as to wetness,) and filled with small stones, of which there have been considerable quantities on some parts of the farm. The trenches so filled answer the purpose of drains, and the fences are erected on them. What is called "half wall," is a kind of fence quite commonly made on the farm. It consists of stones, the largest of which would not probably weigh over two hundred pounds, laid up in a double row, to the height of two and a half to three feet, and the fence finished by two boards or rails, the posts for which are set before the stones are laid up. Besides these trenches other drains have been made and covered. In this way, many acres, which, when Mr. Morse came into possesssion of the farm, a few years ago, were nearly worthless, now constitute some of his best lands for hay.

MAPLE SUGAR.—The manufacture of this article is carried on to a greater extent in Vermont than in any other part of the Union. It is now in many cases produced with profit, and no doubt may be made a source of considerable income. We were surprised at the quantity of sugar which is produced from a tree. We saw a handsome sample of a hundred and thirty-six pounds made from twelve trees, by Mr. Isaac Landon, Cornwall. Mr. Morse made a thousand pounds, and Mr. Lyman Hall, a neighbor of Mr. Morse's, made twelve hundred pounds last spring. We have samples of Mr. Morse's which are excellent. The whole lot would readily command ten cents per pound. The process of manufacture has been much improved of late. Mr. M. now boils the sap in shallow pans, and it is "stirred off" in graining. But as we do not fully understand the business, we hope Mr. Morse or Mr. Hall will furnish an article in relation to it.

The quantity of sugar that might be produced from an acre properly planted with the sugar maple, has never, perhaps, been ascertained; but we have no doubt that at least fifteen hundred pounds might be easily obtained. Allowing one tree to a square rod, or a hundred and sixty to the acre, and estimating the produce at ten pounds to the tree, (which is less than is frequently got,) the aggregate produce would be sixteen hundred pounds. The trees might often grow on land not valuable for other purposes, as on rocky hill-sides, and by the borders of fields and highways—so set as not to keep the roads wet by their shade. What are called "second growth" trees are preferred for sugar. They have generally larger tops and more leaves, by which the sap is probably better elaborated.

TRIAL OF THE CENTRE DRAFT PLOWS.

MR. JAMES PEDDER, general agent for the sale of Prouty and company's CENTRE DRAFT PLOWS, brought to this city in May last a number of these implements. They being comparatively but little known in this vicinity, several persons were desirous that a public trial should be made with them under the supervision of a judicious and impartial committee. This was more especially wished, as an unfavorable report had reached this country in regard to the performance of this plow, and that of Messrs. Ruggles, Nourse and Mason, at the exhibition of the Royal Agricultural Society of England last year. The work of the American plows at this trial was represented as *decidedly bad*—a result for which we are wholly unable to account, except on the ground of the plowmen not being well acquainted with the somewhat peculiar construction and operation of these plows. We have seen the operation of several of the most celebrated English and Scotch plows, which have been brought to this country, among which we will name that of the celebrated *Ransome* plow, which received the highest prize at the English trial referred to. With the exception of this, we are confident we have seen no imported plow, which, everything considered, can be deemed equal to the American plows mentioned. The Ransome plow which we saw, was imported a few years since. It is unquestionably a good one. Some late improvements are said to have been added, of which we cannot speak. We know not what would have been the result of a comparative trial of this with the best plows made in this country; we however hope that such trial will yet be made—but at present we can only express our concurrence generally with the conclusions of the committee in regard to the work of the Centre Draft Plow, as set forth in the following report:

REPORT OF THE COMMITTEE.

We whose names are underwritten were solicited to examine the Centre Draught Plow and witness its performance, at the farm of T. Hillhouse, Esq. The performance of this duty was certainly far from being courted by any one of us. But having been selected for that purpose, it would have been uncourteous to have declined; and having performed the duty, it is incumbent upon us to report the result of our examination. We have no desire, we must state in the outset, unduly to magnify the Centre Draught Plow, nor to praise unduly its performance. Neither can we be prevailed upon (even if desired so to do) to undervalue all or any of the various new and improved plows now before the agricultural community, which are brought in competition with it. But we nevertheless willingly report truly and fairly the facts in the case.

The committee are almost strangers to each other—inhabitants of different parts of the state—chiefly, if not entirely, practical men, and accustomed to use (and perhaps prejudiced in favor of) other plows. Yet, with entire unanimity, we concur in the opinion that the Centre Draft Plow is not surpassed by any plow with which any of us are acquainted. The work performed by it is equal in excellence to any thing we have ever seen, and performed with as little labor and fatigue by both plowman and team, as it could, in our opinion, possibly be done.

Perhaps nothing more than the above need be said, as it comprises in general terms all that we can say, or that it can be desirable to say. However we will add:

This plow can be adjusted with the greatest nicety, both as respects the depth of the furrow and the width of furrow slice, with perfect facility and ease.

We are quite sure that it runs very light and is of course easy for the team. But we did not make any trials with the dynamometer, and therefore are unable to make any comparative statement, between the draught of this plow and that of others. All we pretend to offer upon this point, is the result of our observation upon the apparent effort and fatigue of the team; a conclusion which can be relied on to some extent, though we admit, far from being conclusive. We however would remark, by way of fortifying our opinion, that at the celebrated trial of plows, made at Worcester, a year or two since, this plow bore off the premium of one hundred dollars, after a very severe competition with some of the most celebrated plows. So far as the plowman is concerned, we can with certainty assert, that severe labor and strenuous effort on his part is almost entirely done away. Even skill is comparatively useless in working with this plow.

This may seem a strong position to take; but in confirmation of it we must state, that we saw furrow after furrow plowed with great nicety, the hand of the plowman having been laid to the plow only to enter it at the commencement of the furrow. As to the style of work performed, we can only say, that some of the plows lap the furrow slice, (and they are those which we prefer,) and to which our report mainly refers, while another (the one to which the one hundred dollar premium was awarded at Worcester,) turns the furrows flat.

The workmanship of the plow is excellent, and we beg specially to commend the casting of the share from a composition which is much harder than ordinary cast iron, thus ensuring a great degree of durability to the plowshare. If to this it be added that the share is also constructed upon the self-sharpening principle, it can easily be conceived that the purchasers of these plows are ensured against the too frequent recurrence of the vexation that results from the rapid and often *unexpected* wear of the share.

In conclusion, we would remark that this plow has obtained great celebrity, and has received and is daily receiving the cordial approbation of men whose opinion, have far greater weight than ours. We believe that is has lost none of its celebrity by the trial which we witnessed, for out of the numerous company present, there was not one who did not seem to be both surprised and delighted with the performance of the plow.

It may be asked how it comes that both this plow and the Worcester county plows, Messrs. Ruggles, Nourse & Mason's, were condemned at the fair of the English Agricultural Society last year. Nor is it easy to answer the question. Prejudice, national prejudice may have had something to do with it. All we can say is, that some of the committee at least were practical men: we have reported only that which we saw. Moreover, there was present on the ground an English plowman, recently arrived, whose judgment was perfectly unbiased, who pronounced this equal to any English plow he had ever handled, and fully concurred with the committee in the opinion expressed by them.

J. B. Nott, Albany Co.
T. Hillhouse, "
John McVean, Monroe Co.
C. Hannam, Genesee Co.

PLOWING FOR WHEAT.

But few farmers are willing to undertake the purchase and use of the subsoil plow, but all may adopt the practice of *deep plowing* by the ordinary method. In many parts of the country, the soil may be much improved in its wheat-raising qualities, by throwing up and mixing with the surface, a small portion of the subsoil. In some instances this has been attended with strikingly successful effects. In others, where the subsoil has been thrown on the surface, the increase in the growth of wheat has been almost incredible. A neighbor scattered the earth taken from a ditch over the surface for many feet on each side. Afterwards when the crop of wheat averaged on the rest of the field scarcely five bushels per acre, the portion which had been thus covered with subsoil, yielded from twenty to twenty-five bushels per acre. In this case, the soil was light, and the subsoil somewhat clayey, and contained a small portion of carbonate of lime, effervescing slightly in acid; the operation rendered the soil stronger, firmer, and better adapted to the growth of wheat. Doubtless large portions of our country might be thus greatly, and perhaps permanently improved, by the use of such manure, thus lying in immense quantities just beneath the surface. But there may be other subsoils not only useless, but actually detrimental; hence the necessity of discrimination and care.

PEAT AND POND MUD.

In many localities, it is not practicable to obtain these enriching substances except at the driest seasons of the year, when the water is evaporated which usually covers them. The vast quantities of them which abound in many parts of the country, especially of peat and swamp muck, while the scant crops of the adjoining fields show how much their presence is needed, ought to stimulate a greater number of our farmers to seize the present opportunity to cart them upon their fields.

Many have been disappointed from the use of swamp muck or peat. Its results are much less striking than those of farm yard manure, not only because it possesses less inherent richness, but because it contains far less of soluble parts, and consequently imparts its strength more slowly to growing plants. This quality however only makes it more enduring. Chemists have found that by decoction in water, vegetable mould loses a small portion of its weight by solution; but if the remaining insoluble portion is exposed to air and moisture a few months, another part may be again dissolved. Thus, peat, muck, and all decayed vegetable fibre, becomes a slow, but lasting source of nourishment to plants.

Disappointment also results from the want of thorough intermixture with the soil. If peat or muck is merely spread in masses upon the surface of the soil, and then plowed in, it rarely proves of much benefit, until, by several years tillage, it becomes thoroughly intermixed. To prevent such failure, it should be very thoroughly and repeatedly harrowed, so as to promote a thorough admixture with the surface soil, before it is turned under by the plow.

By such treatment as this, heavy soils may often be greatly improved, and rendered lighter and more free, as well as more fertile.

But it is when shovelled out and dried, to be mixed with farm yard manure, as a recipient for its volatile or liquid parts, that peat or muck becomes pre-eminently valuable. We say *dried* because if it is already saturated with water, of which it will often take in *five-sixths of its own weight*, it cannot absorb the liquid portions of the manure. But if well dried before hand, that is, if these five-sixths of water are expelled, it will then absorb five-sixths of its weight in liquid manure, and it then becomes eminently fertilizing. The chief reason that the application of peat to barn-yards has not proved of greater value, is, that farmers have applied it when it was already filled with water, and consequently it could take in little of any thing else.

When peat or muck is to be drawn to a distance, it is obvious that a great saving would be made by shovelling it out under large coarse sheds, some months before drawing, that the water may be well evaporated, and so obviate the necessity of drawing several tons of water to every ton of peat.

Pond mud is sometimes a highly fertilizing substance. Where the materials which streams deposit, consist of road-washings, or the drainings of farm yards or of manured fields, they constitute frequently a compost of the richest kind. The same remark will apply to stagnant ponds which have been much frequented by animals, and which have become dry. In the latter part of summer and early in autumn, these valuable materials may be easily carted out on the adjacent lands, and they form one of the best and most suitable manures for wheat, being free from the objections which exist in cases of unfermented or long farm-yard manure.

SHELTER FOR SHEEP.

Every one has perhaps heard of the man whose roof remained unrepaired to the perpetual detriment of all dry articles and sound lungs within doors,—because when it rained he could not repair it, and when the weather was fair he did not need the repair. For a similar reason, many flocks of sheep pass year after year, unprotected because shelters are not needed in summer, and cannot be made in the depth of winter. To induce their owners to adopt an improvement, and provide, in time, suitable shelter for their flocks, we wish to state a few facts in the case.

Lewis A. Morell, of Tompkins county, N. Y., before he had provided shelter for his flock of Saxon sheep, 1200 in number, lost from 70 to 100, during winter, and once lost 150. For the four successive years after protection, the average number wintered being 1,800, the average yearly loss amounted to only 31, being less than 1¾ per cent.

J. W. Childers, of the English Agricultural Society, brought his sheep to shelter about Christmas, and found before two days that they did not eat so much as when exposed, by the proportion of five to three. When in the field, his flock required fifty baskets full of turneps a day; but when sheltered they needed only thirty a day. "Yet such great progress," said he, "did they make, that you would have thought they had been eating fifty baskets a day, when shut up, and only thirty when in the field." In another experiment, which was accompanied by accurate weighing and measuring, where turneps and oil-cake were given as food, the quantity of turneps diminished in a few weeks nearly one quarter, and the oil-cake diminished about one-third; while the increase of weight resulting from shelter was more than one-third. The Editor of the English Agricultural Gazette, inferred from actual experiments, performed by himself, that twice as many sheep might be kept in a fatting condition on the same quantity of food under perfect shelter, as under entire exposure. If these results were obtained in the mild climate of England, what may not be expected in our severe winters?

L. A. Morell is satisfied that at least one ton of hay to the hundred sheep is saved by protection every winter. "Of oats, which I fed liberally before protection, the amount saved is equivalent to 500 bushels each year, and yet my sheep have been in finer order than when they were grained; showing, notwithstanding the virtue of grain, that there is *more virtue in warm shelter*." The same successful manager has also found that the aggregate increase in four clips of wool from his flock, resulting from protection, amounted to 1250 lbs.; and that the *increased* number of lambs exceeded one hundred a year.

In view of these facts, we wish every farmer to make a calculation of the whole amount of food thus saved every winter, the increase in the weight of his sheep, the saving of life, the increase of wool, and the increase in the number of his flock.

If it will cost one dollar per head, to winter sheep by the ordinary way, then to winter 1000 would cost $1,000.

One third of this saved would be..................	$333
The difference in loss by wintering, according to L. A. Morell, would be about 50 sheep, which at $2 each, would amount to....................	100
Putting the increased value of his sheep, by increase of weight, at one tenth the value of the flock, ...	200
Increase in the fleece, say 160 lbs.,...............	60
Increase in lambs, say 60,........................	50
	$743

equal the total saving every year, by the use of suitable shelter, at a very moderate estimate, and which would abundantly pay for suitable sheds, if they required erecting every year.

Now is the time of year to make preparation, to prevent the disastrous results, which must always attend exposure through our long, stormy, and freezing winters. For directions in the construction of sheep sheds, see the Cultivator, vol. 7, p. 15.

LECTURES ON THE CHEMISTRY OF VEGETATION.

We have been exceedingly interested in reading the reported sketches of Dr. Playfair's lectures on this subject, lately published in our foreign exchange papers. We have, however, only room for a brief notice of the most interesting portions. The point to which he first called particular attention, was the great care displayed by nature in the introduction and protection of seeds. Some were surrounded with a hard scaly armour of flint as in the seeds of corn; some have thick coats, such as beans and peas: others are protected by hard shells, and placed in the midst of a pulpy, fleshy covering, destined as manure for the seed, such as the peach. In all, the greatest care was taken to protect the seed from injury until the period of germination. Three parts were distinguished in all seeds; 1st, the *cotyledon*, which forms much the largest portion of the kernel, and which is in fact the magazine of food for the young plant; 2nd, the *plumule*, plume or *gemmule*, which is the young embryo that is afterwards to become the stem of the plant; 3rd, the *radicle*, or part which is to become the roots. In the common garden bean the cotyledon is divided into two portions called lobes; the plumule or embryo stem is the small white point observed at the upper part of the divisions or lobes, and the radicle is the curved white cone which is found at the base. The most frequent form in seeds was two cotyledons; but in other seeds, for example the grasses, in which the food is only in one cotyledon, and in other seeds, there were compartments for the primary food. Consequently, botanists divided plants into two great divisions; those having the food of the embryo stored in one magazine—the monoctyledonous plant; and those having two or more compartments—the dicotyledonous or polycotyledonous plants. These two plants possess capital differences. As soon as those essential parts of a seed, the plumule, radicle, and cotyledon, are formed, it loses all activity, and life apparently becomes suspended, until called forth for the purpose of re-production. Under favorble circumstances, seeds may be kept for a very long time in this inactive state. He had himself seen, in Mr. Miles' garden, at Bristol, wheat growing, the seeds of which had been found in a mummy; Pliny states a case where he had known wheat to grow after 100 years; and Home mentions an instance in which rye grew after 149 years. Coffee beans are the seeds which most easily lose their suspended vitality; for they refuse to grow, unless planted immediately after being taken from the bush. But expose a seed to the combined influence of light, air and moisture, and the suspended vitality becomes active. The embryo plant feeds upon the nutriment in the cotyledon; the radicle protrudes from the seed, descends into the ground, and forms roots; the little plumule ascends, and forms a stem, and the cotyledon shrivels up and disappears. The little plant now feeds itself from the air and the soil, and grows apace. The stem increases in height and throws out branches, and leaves, and the roots diverge in search of food. It was long a question of dispute to what force the form of a tree was owing. Some philosophers said the roots descended into the earth, because they loved moisture, and the stem ascended because it loved the air. But Detrochet showed this was not the case; for he took a box and bored holes in the bottom of it, placing beans over each hole, and some moist earth on top of the bean. The roots should have grown up in the moist earth and the stems downward into the air, if that opinion had been correct. But this is not the case; for the radicles went downwards into the air, and the stems ascended into the earth; and in a short time they shrivelled away and died. Be the force, then, what it may, roots have a natural tendency to descend, and the stems to ascend. That this has some intimate connection with gravitation, Knight has shown by his beautiful experiment. Mr. Knight arranged wheels driven by water, in such a way that he could either drive them horizontally or vertically, and regulate their speed. He then planted beans on the rim of the wheel, in conditions favorable to growth, and then set his wheels in motion. The effect of this was, that, when the wheel attained a certain degree of speed, which, in the case of the wheel in question, was two hundred and fifty rotations in a minute, a new force came into operation—the centrifugal force—and overcame that of gravitation. The roots, instead of descending, obeyed this new force, growing outwards, forming in fact, prolongations of the radii of the wheel; while the stems took the opposite direction, until they came in contact with the axis. But when the wheel revolved less rapidly, so that the force of gravitation was not overcome but merely modified, the radicles pointed downwards, about ten degrees from the horizon, and the plumules pointed upwards at the same angle, and the inclination was greater or less, according as the wheel revolved more or less rapidly. By this capital experiment, Mr. Knight proved that the descent of the roots into the soil, is essentially connected with gravitation. Botanists then considered that the lateral branches were due to the same cause; their natural tendency being to proceed upwards, but gravitation pulling them downwards. To a certain degree only, is this correct. Parasites do not obey the law of the earth's attraction; for they always grow at right angles to the plant to which they are attached, whether that be upwards, downwards, or laterally. Now, branches given off from the stem may be considered parasites, which would grow at right angles from the stem horizontally; but they were also influenced by the upward direction, so that they grow upwards and outwards, and to a certain extent also by attraction, so that their direction is varied. The directions of the stem and leaves, in fact all the green parts, are much influenced by light, which is therefore one great cause of their upward direction, as shown even in the case of a root; when its tip becomes green it grows upwards like a branch; and a stem, put under the ground away from light, grows downwards like a root. Similar love for light is seen in the leaf; the upper part of a leaf is deeper green than the lower surface, and bends upwards to the sky; while the latter is directed to the earth. In some cases, both the upper and under surfaces of the leaf are equally green, and then its edges point to the sky. This was strikingly seen in the plant called bent grass. It had its rough or unpolished side upwards, and its beautiful smooth green side downwards, and it twisted up its leaves to the sun so that the polished side should turn upwards to the light.

The first point in the growth of plants is the germination of the seed, the cotyledon of which contains a stored-up nutriment for the embryo—consisting of some mineral matter, with starch, gum, cheese, and fatty oils; although in some seeds, as in the anise and cummin, the fixed fat is substituted by a volatile oil. The analysis of Boussingault gave 27 per cent. of cheese in peas; his (Dr. Playfair's) own gave 29 per cent.; the two varieties obviously differing. The analysis of the French chemists gave 10 per cent. of this cheesing matter in oats; those made by the lecturer himself, yield between 11 and 12 per cent. The oily matters also vary: some seeds, as that of the colewort, contain 40 per cent of oil; while that of wheat does not contain one per cent. It would be seen then, that in order that a seed should germinate, the concurrence of a proper temperature of moisture and of air was absolutely essential. Formerly, physiologists believed that light was injurious to germination; this error originating in the fact, that seeds germinate best at a certain distance beneath the surface of the ground. But Saussure showed that the apparently injurious effect of light was owing to the drying of the seed when too near the surface. He took two seeds, placed one of them in an opaque, the other in a transparent glass; watering them both alike; and he found that the seeds in the transparent glass germinated first. When seeds are placed under a jar of air, and properly supplied with water, the radicles and the stem soon appear. Supposing that there is no alteration in temperature or in conditions, Saussure, in his first experiments, found that the bulk of the air remained unchanged, although a quantity of the oxygen had been abstracted, and replaced by carbonic acid. This led Saussure to believe, that the first act of germination was simply the extraction of carbon by means of oxygen. Oxygen is quite essential to germination, which cannot be made to take place in any gas not mixed with this element. But what is very curious, carbonic acid gas, which is the primary food of plants is positively injurious to germination. In fact, germination proceeds more rapidly, if fragments of lime are placed along with the seeds to absorb the carbonic acid. Saussure was not quite correct in his first experiments; for, on inspecting them with minute accuracy, he found that some plants actually did increase the bulk of the air, while others diminished the bulk. To Boussingault belongs the honor of having explained this phenomena. That distinguished philosopher, during the last year, had made some excellent experiments on germination. He analysed some seeds before germimation, and set others to germinate. When the plumule and radicle began to appear, he analysed them again, and so on until the stems and the leaves were distinctly formed. The results of his experiments were, as Saussure had perceived, that there is a quantity of carbon abstracted by oxygen; but the loss of weight is greater than can be accounted for by the carbon removed. Some of the oxygen in the seed has also disappeared, so that it was obvious that part of the carbon had become burned at the expense of the oxygen existing in the seed itself; and this circumstance completely accounts for the alteration in the volume of air observed by Saussure. But, after all, this is only the ultimate view of the process; for there can be little doubt, that the operations in progress are much more complex than the immediate extraction of carbon. If seeds in the act of germination be put upon blue litmus paper, the blue color becomes changed into a red, showing distinctly that an acid is produced during the act. Becquenel thought this was acetic acid; but Boussingault suggests with much more plausibility, that it is the acid obtained from milk—the lactic acid. Be that as it may, the formation of the acid indicates that there are intermediate steps in germination; respecting which the chemist is entirely ignorant. When the seeds are examined after the first act of germination, the process is very difficult to follow. The act of germination still progresses; but the act of vegetation does so too, and both are in antagonism. Germination abstracts carbon from the seed; vegetation adds carbon by drawing it from the atmosphere, in the form of carbonic acid. One thing, however, is certain, from Boussingault's analysis, that ammonia now disappears from the seed. These were merely indications how to proceed in our investigations, in order to develope this most interesting act of passive into active life. At present our information might be considered almost *nil;* but the recent researches are full of hope; and if carried on with the united care of the physiologists and the chemist, will doubtless lead us nearer to truth. The uncertainty as to the nutrition of the embryo, ends with the development of the leaves; the young plant has been ushered into being, and we can now clearly follow its course to maturity. In conclusion, he would draw attention to this singular first act of life. The physical function of animals was to expire carbonic acid; that of plants to expire oxygen. But the first act of the embryo was to assume this high function of animals. Reason on this as we might, there was some curious mystery to develope in the extraordinary relations of life. The first act of vegetable existence was one possessed by the most elevated of animals; but then again it assimilated itself to similar functions in the lowest order of vegetables. The fungi do the same; they do not live on the air, but on decaying substances, and breathe out carbonic acid. Was the first act of vegetation a lofty or low act of life? If the exhalation of oxygen from plants were one of the most important purposes of their life (as it doubtless was,) how came it that the lowest order of animals, the animalcules, also possess this function? These were strange anomalies, which however inexplicable at present, philosophers should not relax in their endeavors to penetrate. In fact, as he proceeded he thought he should be able to trace out, in this apparent contradiction, the most beautiful harmony and most exquisite design of means to end—a harmony and design which make us only the more regret that our own ignorance and want of power prevent us giving to them at present a more intimate comprehension.

INQUIRIES.

Artichokes, &c.—G. A. F. (Spartanburg Dist., S. C.) Clover hay, corn fodder, or straw, would do well to feed with artichokes. Some kind of dry food is required to counteract the laxative tendency of the roots. The *tops* make quite good fodder cut and dried before being injured by frost. A mode of planting which appears to do well is, to plant in drills three to four feet apart and ten to twelve inches in the row. We should hardly think any crop would grow to good advantage on the same ground with the artichokes.

Tobacco.—J. P. (New-York.) An able article on the subject to which your inquiries are directed, will be found in our last volume, page 89.

Walls of cobble stones.—"A Subscriber," living in a section where this material is extremely plenty, wishes to know in what manner it could be best made into a permanent wall—what would be the necessary cost per rod, &c. The information will be thankfully received from any who is acquainted with the subject.

Shepherd's Dogs.—Any person having this breed of dogs to dispose of, may find purchasers by giving us notice to that effect, with the price.

VEGETABLES FOR SEED.

Early sown beets, carrots, turneps, parsnips, &c., are not thought so good for seed as those which are sown later, because the advanced ripeness of the vegetable tends to decay, and from the defect of the roots, the seed-shoots are less vigorous than when the plant is allowed less growth the first year. It is therefore recommended that such of those vegetables as are intended for seed, should not be sown till June. The roots will then keep perfectly sound through the winter, and will throw up vigorous sprouts in the spring which will bear good seed.

It has been said that unripe potatoes are also best for seed. We have never tested this by experiment, but it is not unlikely that they may partake somewhat of the same qualities as the vegetables above mentioned, and that the green or unripe ones might sprout and grow the most vigorously.

DONATION IN AID OF AGRICULTURE.

The Hon. Zadoc Pratt has presented to the Greene County Agricultural Society the sum of $250, "to be distributed," in the language of the donor, "along with their other funds, in suitable premiums, at such time and in such manner as the society may judge most advantageous to the cause of domestic industry." It, is, however, suggested that a liberal portion of the premiums might be advantageously bestowed for encouraging attention to the breeds of cattle and horses best suited to that highland region, and for exciting emulation in the making of butter and cheese. Mr. Pratt also further remarks:

"Without wishing to obtrude my opinions on men more familiar with the subject, I would also respectfully suggest that the premium list be arranged so as to excite more attention to the improvement of our native breed of cattle and horses as probably calculated to weather our climate better than some of the imported cattle. Though I would not be understood as underrating the very valuable qualities developed by careful experienced culture in the management of live stock, as well as of the soil."

On the reception of the above donation, resolutions expressive of the thanks of the society were unanimously passed, and "the Executive Committee also resolved, that in arranging the premium list for the next annual fair, premium would be given as far as it could consistently be done, in accordance with the suggestions of the letter accompanying the donation."

Early Progeny.—The *Buckeye Eagle*, (Marion, O.) says a Durham heifer belonging to J. S. Copeland, of that place, aged only 15 months and 26 days, gave birth, on the 13th ult, to a well grown, living calf! Both mother and calf were doing well.

CATTLE SHOWS THIS YEAR.

New-York State, at Utica, Sept. 16, 17, 18—Dutchess County at Poughkeepsie, Oct. 1—Montgomery County, at Canajoharie, Oct. 5—Madison County, at Hamilton, Oct. 1, 2—Otsego County, at Cooperstown, Oct. 1, 2—Oneida County, at Rome, Sept. 9, 10—Greene County, at Cairo, Sept. 24, 25.

Hartford, Ct., Oct. 1, 2, 3—New-Haven, Oct. 1, 2.

Hampden, Mass., at Springfield, Oct. 8, 9.

FAMILY ALMANAC.

Mr. Editor—In addition to the notice in Cultivator of last mo., (p. 225,) offering premiums for the best mode of *keeping accounts*, &c., the writer further states that he wishes to give in the forthcoming *Family Almanac*, as complete a list of the *Agricultural*, *Religious*, and *Scientific* periodicals of the U. S. as possible. Publishers of such are therefore requested to forward one or more of their nos. to the undersigned by 1st September.

It is intended to publish in this work, a table of *distances, freights*, and *fares*, on all the great thoroughfares of the country, by steam, rail, and stage; as accurate and extensive as practicable. Correct and definite information in furtherance of this object, will be thankfully received, especially from the "great west."

The above work being adapted to, and circulating in all parts of the country, will, it is believed, afford a proper medium for advertisements and circulars of general interest. Such will be inserted at the close of the work, on the same terms as charged in the Cultivator—$1, for 100 words. Address, (post paid), A. F. W., Washington, D. C.

SCRAPS,

Condensed from various Exchange Papers.

Soap suds as manure.—A writer in the London Gardener's Journal, says he found the suds from a tank, when applied to hyacinths in pots, to produce extraordinary effects,—more so than the application of Potter's liquid guano. They also produced very satisfactory results when applied to strawberries and French beans. Circumstances, however, may render it eminently successful only in peculiar cases.

Carrots for horses.—The proprietor of an extensive livery stable feeds his horses on carrots with oats, and considers a peck of carrots and a peck of oats as better for a horse than half a bushel of oats alone.

To get rid of logs, on new lands, and make use of them for manure, some persons pursue the following course: Plow a deep furrow alongside the log, and deepen it by two or three successive furrows, and roll the log in, covering it with one or two more furrows. It completely rots in a very few years, and is then gradually mixed with soil by subsequent cultivation.

Eggs.—A moderate computation would place the number of eggs, consumed annually in the United States, according to Commissioner Ellsworth, at 1,400,000,000; which at an average of 6 cents a dozen, would amount to $7,000,000.

To frighten Crows.—A correspondent of the Boston Cultivator, says nothing is better than to place a few empty barrels in different parts of the field—that the crows are afraid of nothing in plain view, but the fear of an ambscade is sufficient to keep them away. "As to placing effigies in a field for the above purpose, it is only an insult to their common sense; it was but yesterday I saw one of those black-coated gentlemen, perched on a limb of a tree to which one of these pretended scare-crows was suspended making the most ridiculous cawings imginable, either at the image or its maker, most probably the latter."

Productive apple tree.—The Boston Cultivator says, a tree on the farm of Morris Eames, Dover, Mass., grafted in 1835, produced 7 barrels in 1838; 11 barrels in 1840; and 14 barrels in 1842. Nearly all the small limbs were grafted, two hands being a day and a half in doing it. By this means, the top was speedily and entirely changed.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, July 23, 1845.

COTTON.—Ten to twelve thousand bales were destroyed by the great fire in New-York of 19th ult. Prices, 7¾a7⅞.

BUTTER.—Goshen Orange County, 14a17—Western, 10 a 12.

CHEESE—new, 5½a6.

FLOUR—Genesee, $4.37½—Ohio and Michigan, $4a$4.31¼.

GRAIN—Wheat, dull—Rye, 65—Corn 49a50c.

HEMP—Dew rotted, per ton, $68a$70—water rotted, $90a$110.

HOPS—per lb. 13a14 cents.

HAMS—Pickled, per lb. 6a6½—smoked, 8a8½.

BEEF—City Mess, $9.50a$9.75—Tierce beef, suitable for shipping to England, scarce and wanted.

LARD—(good) 8a8½.

PORK—Per bbl. mess $12a$13—prime, $9.37½a$9.81.

TOBACCO—Kentucky, per lb. 3 cents—Connecticut seed leaf, 8a10.

WOOL—We give Boston prices according to the New-England Farmer of July 16.

Prime or Saxony fleeces, washed per lb.......	$0.40a0.42
American full blood fleeces,.................	37a0.38
" three-fourths blood fleeces,........	35a0.36
" half blood do	32a0.33
" one-fourth blood and common,....	30a0.31

FARM FOR SALE.

THE subscriber offers for sale the farm upon which he now resides, situate in the village of Auburn, in the county of Cayuga, and containing 100½ acres.

This farm lies upon the south side of the western turnpike, (now Genesee-st., Auburn,) and is well known as having been the residence of Hon. Nathaniel Garrow, deceased, for many years.

The buildings, fences and other erections thereon, are ample and in good repair; the soil will vie with that of any other farm in Western New-York, for fertility, variety and earliness of vegetation. Great attention has been paid as well by the former as also by the present owner, to the selection and cultivation of choice fruit, and there is now upon the farm, in full bearing, a great abundance of the best varieties of apples, pears, cherries, peaches, grapes, &c. &c. The farm is well watered, durable springs, which give a never failing and ample supply.

The location is believed to be as desirable as that of any other farm in the state, as well for farming purposes as also for the residence of the gentleman or a man of business, being withing a few minutes walk from the Rail Road Depot, and within a few rods of the Female Seminary.

A credit will be given, if desired, for a large portion of the purchase money, for a term of years upon payment of interest annually. Inquiries may be made of the subscriber upon the premises, of Luther Tucker, Esq., Editor Cultivator, Albany, or of David Wright, Esq, Auburn. JOHN REMER.

Auburn, N. Y., July 14, 1845.—3t.

A LAKE FARM FOR SALE.

THE subscriber offers for sale the Farm owned by Hon. Jedediah Morgan at the time of his death, situate on the east side of, and adjoining, the Cayuga Lake, about two miles south of the village of Aurora, in the town of Ledyard, (formerly Scipio,) containing about 360 acres, with a good porportion ot Timber Land, on which the oak and hickory predominate. The road leading from Auburn to Ithaca, via Aurora, passes through the Farm, dividing it into two nearly equal parts.

The land is of an excellent quality, as well for wheat and other grain as also for grass.

The situation and location is believed to be as eligible, and to combine as may advantages, as any other farm in the county. The first point of land which makes into the Cayuga Lake, above the village of Aurora, is a part of the farm.

A large proportion of the purchase money can remain, secured by bond and mortgage, upon annual interest. Any person wishing to view the farm, can do so by applying to C. C. WHITE, the tenant upon the premises. The whole will be sold together, or in parcels, to suit purchasers. Letters of inquiry addressed to the subscriber, *post paid*, will be promptly answered.

DAVID WRIGHT,
Trustee of the Estate of Jed'h Morgan, dec'd.

Auburn, July 14, 1845.—August 1—3t.

FARM FOR SALE.

THE subscribers will offer for sale at Public Auction, on Thursday, the 21st day of August next, at 12 oclock M., on the premises, that valuable farm in the town of Bethlehem, formerly the residence of John H Burhans deceased, 3½ miles south from the city of Albany, and one mile from the river; containing about 104 acres of land, some 30 acres of which is covered with wood; a good orchard of about 100 bearing apple trees; the dwelling house, barn and other buildings in good order.

Said farm has a never failing stream running through it, and an excellent well affording an abundant supply of water at all times.

Persons desirous of purchasing, will call on the subscriber, H. H. Burhans, on the premises, who will show them the superior qualities and location of the place.

Also, a quantity of household furniture, and farming utensils will be sold. Terms made known at the sale.

H. H. BURHANS, } Assignees.
P. G. TEN EYCK, }

Bethlehem, July 22, 1845.—1t*

LINNÆAN BOTANIC GARDEN AND NURSERY,

Late Prince's, Flushing, L. I., near New-York.

THE new proprietors of this ancient and celebrated Nursery, late of William Prince deceased, and exclusively designated by the above title for nearly fifty years, offer for sale, *at reduced prices*, a more extensive variety of FRUIT AND ORNAMENTAL TREES, Shrubs, Vines, Plants, &c., than can be found in any Nursery in the United States, and the *genuineness* of which may be depended upon; and they will unremittingly endeavor to merit the Confidence and Patronage of the Public, by Integrity and Liberality in dealing, and Moderaton in charges.

Descriptive Catalogues, with *directions* for *planting* and *culture*, furnished *gratis* on application to the *New Proprietors*, by mail, *post-paid*, and *Orders* promptly executed. WINTER & Co.,

Flushing, L. I, August 1, 1845.—2t* Proprietors.

TO EXECUTORS ADMINISTRATORS AND GUARDIANS.

New and Important Law Book Just Published.

THE "*Executor's, Administrator's and Guardian's Guide,*" containing a summary of the Laws of New-York, regulating the appointment, powers, duties, rights, and obligations of Executors, Administrators, and Guardians, with general directions appertaining thereto, to which is added an Appendix, containing many of the practical forms necessary to be used by them in the transaction of the business relating to their several trusts, &c., by David Wright, Esq., Counsellor at Law.

Published and for sale wholesale and retail, by
J. C. DERBY & Co.,
Law Booksellers, 107 Gen. St.
Price $1,50. Auburn, N. Y.

N. B. Persons at a distance, wishing a copy or more of the above new and valuable work, can have them sent by Express, *free of expense*, (upon remitting the amount by the same way) to the different Depots on the line of Rail-Road, as we are the Express Agents of Livingston & Wells, at Auburn.

☞ Agricultural Books of all kinds kept constantly for sale by

August 1—1t. J. C. DERBY & Co.

DR. VAN BUREN'S RHEUMATIC EMBROCATION.

RHEUMATISM ANNIHILATED.

THE proprietor of the Rheumatic Embrocation, comes before the public with increased confidence in the healing virtues of his remedy; for since he first offered it to the public, it has been tried in the worst possible, and most aggravated cases, over which it has completely triumphed; in some instances, indeed where the patient had been given up by the attending physician as incurable; and in many cases where all the remedies placed before the Public for the cure of rheumatism, had been faithfully used, without the least effect; thus proving its transcendent superiority. It will allay the pain and soreness, (sometimes in a few minutes,) and reduce the swelling in a much shorter time than can possibly be effected by any other means; in fact, will relieve when all others fail; nor can injury result from exposure after its application. The patient will also be less liable to another attack after being cured by this remedy, than by other appliances; as it cannot effect the constitution in the slightest degree, nor impair the parts immediately involved; but on the contrary, will restore them to their original healthy condition and usefulness. One of the most important advantages this possesses over all other remedies is, that where it is properly applied, no contraction of the tendons can possibly ensue; and where contraction does exist, will effectually remove it; thus preventing any distortion of the extremities, and the patient from becoming a cripple for life, as is the case in thousands of instances, where other modes of treatment are adopted. The proprietor has received from various parts of the United States, and is receiving almost daily, the most flattering testimony to the curative powers of his Rheumatic Embrocation; and he feels now more justified than ever in asserting, that it is a never failing cure, in all the various forms of Rheumatism, Chronic or Inflammatory, and in all complaints of an analogous character, such as contracted tendous, stiff or weak joints and back, sprains, bruises &c., when faithfully and perseveringly employed. He cannot occupy the necessary space in an advertisement, or he would place before the public, the documentary evidence of the truth of his assertion. But though he cannot do this, he is willing at any time, to show them to all who may call upon him at his principal office, No. 56 Sand-st., Brooklyn, Long-Island, N. Y.

Agents solicited from all parts of the United States and the Canadas, and dealt with on favorable terms. Price $1 per bottle.

M. VAN BUREN, Sole Proprietor.

Wholesale Agents, OLCOTT, McKESSON & Co., 127 Maiden Lane, New York. August 1—1t*

FOR SALE.

THE farm of Robert White, Jun., Shrewsbury, N. J., highly improved, and in the immediate vicinity of excellent marl. See N. Y. Journal of Commerce.

July 1—2t*

SEED STORE AND AGRICULTURAL WARE-HOUSE.

OUR Spring supply of seeds is now ready, and we shall be happy to receive orders for Field or Garden Seeds, of every description, Black Sea, Italian and Siberian Spring Wheat, Barley, Peas, Clover Seed, Timothy Seed, Seed Corn, Shaker and other Garden seeds, &c. Also, a full assortment of farming tools selected from the best manufacturers in the country. Hoes, Scythes, Forks, &c. cheap by the dozen. E. COMSTOCK.

Rome, Oneida county, March 1, 1845.

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☞ **ADVERTISEMENTS inserted in the Cultivator, at $1,00 per 100 words for each insertion.**

DR. FEUCHTWANGER'S SCOLICOTOXICON.

RATS, Mice, Cockroaches, Flies, Bed Bugs, Ants, Moths, &c.—The following certificates out of thousands, may give the public an idea of the usefulness of the various preparations, viz:

The room in the building 70 Wall street was badly infested with Cockroaches, and one application entirely dispersed them.
Signed, CHS. MOUNT.

I have used Dr. F.'s preparation to exterminate Rats and Mice, and have wonderfully succeeded in clearing them from house and yard after the first trial. Signed, JOSEPH GRAHAM.

Dr. Feuchtwanger's Fly Paper has been used by me with great success, and near one quart of slain flies has been collected out of curiosity in four days. Signed, A. C. VAN SCHOONHOVEN.

The bed bugs have been cleared out from my store, 211 Hudson-st., effectually. Signed, JOHN SOLOMONS.

The yard in the rear of the Courier & Enquirer office has been for years infestsd by rats, and one application has destroyed them.

The subscriber feels perfectly assured that he is in all instances capable of clearing fields, barns, plantations, granaries, houses, &c., from every species of Vermin, Rats, the large Ants, Weavels, Mice, Cockroaches &c., and believes to say with confidence, that he will and can warrant all his various preparations.

He solicits orders from the country, and promises no person shall be dissatisfied; in short, he can assure his friends that he is performing wonders with his Fly Paper, and Rat and Cockroach Poison. Apply to the oringal discoverer,

Dr. LEWIS FEUCHTWANGER,
August 1—1t. 23 Liberty-st., New-York.

FARM IN ILLINOIS.

FOR SALE—A good farm, with valuable improvements. The subscriber being about changing his business, will sell a great bargain. Also has in immediate vicinity, 2,000 acres choice land, which he will sell at a discount from government price. Address ISAAC HINCKLEY, P. M., Audubon, Montgomery Co., Illinois.

BOOKS FOR SALE.

AMERICAN Farmer's Encyclopedia, price $4—Skinner's Cattle Doctor, price 50 cents, and a variety of other works, for sale at the office of "The Cultivator."

MR. DOWNING'S NEW WORK.

WILEY & PUTNAM, 161 Broadway, New-York, have just published "The Fruits and Fruit Trees of America, or, the Culture, Propagation and Management, in the Garden and Orchard, of Fruit Trees generally; with Descriptions of all the Finest Varieties of Fruit, native or foreign, cultivated in the gardens of this country. Illustrated with numerous engravings and outlines of fruit. By A. J. Downing. 1 vol. 12 mo., (and also 8 vo.)"

This is the most complete work ever published on the subject, and will, it is hoped, supply a desideratum long felt by amateurs and cultivators. July 1—1t.

HOVEY'S STRAW CUTTER.

THIS machine has received the highest premiums of the Agricultural Societies of Massachusetts and New-York, and has given the most entire satisfaction wherever known. Some improvements which it has lately undergone, it is believed. render it as perfect an implement for its destined purpose, as can bo desired. There are six different sizes—the prices of which, range from $12 to $35. The two largest sizes are suited to the application of horse-power, &c For sale in this city. Inquire at the office of "THE CULTIVATOR." July 1—tf.

VIRGINIA FARMS FOR SALE.

I HAVE for sale several good farms, being portions of the estate called Oak Hill, in Loudon county, Virginia, late the residence of President Monroe. It is about 30 miles from Washington, Alexandria and Georgetown—in a most healthy region, well watered and peculiarly calculated for raising stock of all kinds. To industrious and enterprising applicants, very liberal terms of payment will be given. S. L. GOUVERNEUR.
Washington, July 1, 1845—july 1—5t.

FARM FOR SALE.

IT consists of two lots, situated on opposite sides of the Albany and Schenectady turnpike, four miles from Albany. The lot on the north of the road, comprises forty, and that on the south, sixty acres. Both are enclosed by a good fence of boards with chestnut posts, erected a little more than a year ago. The lot on the south side has a small house, a stable with shed, and a good yard for manure, or stock. It is also provided with a well of excellent water: There are permanent streams of water on both lots. The stream called the Patroon's brook runs across the whole width of the south lot. With the exception of about a third of an acre on the north lot, both have been entirely cleared, drained where necessary, thoroughly plowed, seeded last year with clover and grasses, and will yield this season nearly or quite an average of two tons of hay to the acre. The two lots are suitable either for one farm or two farms, but will be sold together or separately, to suit purchasers. The natural position, as well as the soil of both lots is good, and cannot fail to give satisfaction. Every thing considered, a more desirable situation could scarcely be found in this vicinity.

For particulars, inquire at this office, or of JOHN McCARDELL, corner of Nassau and Pine-streets, New-York.
July 1—3t.

CENTRE DRAFT PLOWS.

D. PROUTY & Co., Nos. 19, 20, & 22, North Market-st. Boston, manufacture and keep for sale, a large assortment of the most improved Implements of Agriculture, including their celebrated CENTRE DRAFT PLOWS, Cultivators, Harrows, Straw-Cutters, Seed Sowers, Vegetable Cutters, Corn-Mills, Ox-Yokes, &c. &c. For the character of their plows, they have only to refer to those who have used them. The demand for them for a few years past, has been great—they having been sold extensively over the country from Maine to Louisiana, and the western States, as well as in the British Provinces; and have not failed to satisfy all purchasers of their great superiority in the qualities of neatness of workmanship, strength, durability, ease of draft, and complete execution of the work.

N. B. A few of these plows are for sale in Albany. Inquire at the office of THE CUTTIVATOR.
July 1—tf.

ROME PLOW FACTORY.

THE DIAMOND PLOW which received the first premium at the State Fair at Poughkeepsie, as well as at every County Fair where it has been shown, is manufactured by the subscribers in the very best style, and for sale at wholesale or retail. Also, some eight or ten patterns of approved plans, as well as Scrapers, Cultivators, Cradles, Mott's Agricultural Furnaces, &c. Orders from abroad promptly filled, aad a liberal discount to dealers.
March 1. 1845. BRAINERD & COMSTOCK.
Rome, Oneida county.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES.

VOL. II. ALBANY, SEPTEMBER, 1845. No. 9.

THE CULTIVATOR
Is published on the first of each month, at Albany, N. Y., by
LUTHER TUCKER, EDITOR AND PROPRIETOR.

ONE DOLLAR A YEAR.

Seven copies for $5—Fifteen copies for $10,00—all payments to be made in advance, and free of postage. ☞ All subscriptions to commence with the volume.

OFFICE IN NEW-YORK CITY, AT
M. H. NEWMAN'S BOOKSTORE, No. 199 BROADWAY,
where single numbers, or complete sets of the back volumes, can always be obtained.

☞ "The Cultivator" is subject to newspaper postage only.

Foreign Correspondence.

MR. NORTON'S LETTERS—No. XV.

Laboratory of Ag. Chem. Association,
Edinburgh, July 15, 1845.

L. Tucker, Esq.—During the last month, my changes of habitation were so frequent, in the course of various journeys through the eastern part of England, that I did not find time to write you. My object in visiting England was to attend the annual meeting of the British Association for the Advancement of Science, held this year at Cambridge. At the close of this meeting, Prof. Johnston and myself determined to take a short agricultural tour through Norfolk and Lincoln. We were so fortunate as to meet with companions well acquainted with every branch of farming as practiced in that section. Mr. Breckenridge, one of these gentlemen, is an agent for extensive estates in Yorkshire and Northumberland, and the other, Mr. Johnson, a Yorkshire farmer, who has lately won the prize for the best farm in that county.

We found posting the most convenient way of traveling, as we could then stop when and where we pleased, or turn off from the main road in any direction.

From Cambridge to Newmarket was our first stage. The road is nearly the whole distance upon a low ridge, elevated above the fenny hollows. The soil near the road seemed thin and light, and many fields, in the failure of grass, were overrun with weeds. The soil of the fens is much better, but there is a difficulty in draining, as some of them are nearly on a level with the sea. I am inclined to think, however, that this is not insuperable, and am sure that the higher levels can be perfectly drained. The water from each level is carried round the edge of that below it.

Some miles before reaching Newmarket, we passed from the oalite limestone formation to the chalk, and after leaving that place, we found in a field where they were plowing, the chalk about 6 inches from the surface. The furrow was four inches in depth. The plow was of a very antiquated construction, having but one handle and a wooden mold-board. Much of the farming upon these thin chalk soils is very bad; they are afraid to go down, and keep on skimming the five or six inches of surface soil year after year, without any attempt to deepen it. Their name for barn-yard manure is muck, and they never put it upon this light land. The rotation upon one of these farms was thus given us. It was near Thetford, on the borders of Suffolk. 1, turneps; 2, rye; 3, 4, and 5, any grass that will grow. This completes the rotation; and then come turneps again. No muck is applied, but occasionally a dressing of marl. I do not give this as a type of Suffolk farming, but as showing what may easily and frequently be found there. On the better farms we noticed many fine fields of trefoil and sainfoin, they growing more readily and stronger than clover.

We now entered Norfolk, and kept almost directly north to Walton, passing through some wretched farms. Here we saw the Norfolk plow, a very singular implement, having a pair of wheels three or four feet in diameter, with the plow beam rising above their axle, and fastened in a kind of rack by a chain. It looks very awkward, and I should not think that it had much power.

From Walton to Deerham, we noticed a very decided improvement, especially in the wheat and grasses. The sheep from Newmarket to Walton were almost starving in the pastures. The dry weather of last summer was fatal to immense quantities of the seeds, sown for mowing and pastures. About Deerham the country became rich and beautiful; the village itself is one of the prettiest I have seen in this country.

A few miles on our way to Fakenham, we stopped to visit the farm of Mr. Hastings, where we again found a rather light soil on the largest part of his farm. Some of his land however is clay, and this he has drained in a way which is called herring-bone draining. Deep main drains run down the slope, and short drains slanting across the fields enter into them on each side, like the small bones of a fish into its back bone, whence the name. This method has not proved effective, either here or on several other farms where we found it in use; wet spots are left, and the ground not dried so quickly as it ought to be. We astonished Mr. Hastings by saying, that much of his light land also required draining. "Why," said he, "it is too dry already." Our reasons were these: he plows from 4 to 5 inches deep, and under that, in some fields, is a hard, concrete mass of sand cemented by iron; no root can enter it, and when the roots of the grain reach it, the plant suddenly stops growing, and a crop which promises at first to yield 30 bushels of wheat per acre falls off to 20. Now, drains put into this land, would not be to carry off water, but to purify the subsoil, from which, broken up by the subsoil plow, the rains would gradually wash down into the drains the iron, leaving a wholesome soil for the roots to descend into; being thus able to go down, they would also better resist drouth; this assumption experience has amply confirmed in Scotland, within the last two years. Before leaving Mr. Hastings, it is due to him to say that his farm is well worked, his implements are excellent, and his manuring very liberal. He clays his light soils quite heavily. Since taking the farm he has laid at least 200 cubic yards per acre, over many fields.

From this place we proceeded to Fakenham; and thence to Holkham, for the night. Holkham Hall is a magnificent place of the Earl of Leicester's, and the home farm of about 1200 acres, has been quite celebrated in former years. At present there is nothing worthy of much note in the cultivation. The implement sheds contained a greater display than I have ever before seen on one farm.

Eight miles from Holkham, we called on Mr. Blythe, at Sussex Farm, named after himself by the Duke of Sussex, as a token of his approbation. Heavy rain prevented us from visiting many fields here, but we were delighted by what we saw, as well as by the frank, courteous demeanor and practical wisdom of Mr. Blythe.

He has about 700 acres, chiefly a light shallow soil, resting on the chalk. His wheat crop is from 24 to 38 bushels per acre, about the average that we found throughout the country, on the best farms. He top dresses his wheat with nitrate of soda. Bones also he uses very largely, and now dissolves them all by sulphuric acid; indeed, we met with evidence as to the good effects of this mixture on all sides. Twelve lbs. of acid per bushel seems a good quantity to apply; but it must in all cases be previously diluted with once or twice its bulk of water. An excellent way of applying it, is to place the bones in a conical heap on a bed of ashes, and slowly pour on the diluted acid. They will absorb nearly the whole; the outside bones should then be turned inside, and the whole will in a short time become soft and fit to mix with ashes for drilling or sowing.

We were compelled to hurry away from Mr. Blythe, in order to accomplish a visit to Mr. Overman, at Weasenham, distant about 12 miles. Here we found another excellent practical man. He has a fine dairy of about 30 pure Ayrshires, for the butter of which he realizes from £200 to £250 per annum, or from $950 to $1200. His old grass lands were the best we had seen, and were not managed on the impoverishing system too common in Norfolk, of grazing by day, and folding at night on the fallow fields. He also clays his light land heavily, and what is unusual in that quarter, uses the subsoil plow. It was so nearly dark when we left him that we saw but little of the country between his place and Lynn, where we stopped for the night.

JOHN P. NORTON.

NOTES OF TRAVEL IN IRELAND.—RURAL AND AGRICULTURAL—No. I.

Dublin, February, 1845.

MY DEAR FRIEND—I risk nothing when I say that the notes of my sojourn in his island, that gave birth to my excellent and revered parents, and that has almost claimed me too as a native, will not only interest you deeply, but assist and instruct you in your present pursuits as a farmer.

First impressions they say are very lasting; if my first impressions are to continue, and there is any truth in the saying of "laugh and grow fat," you may expect to see my dimensions considerably increased by the time I return, for my sides ache with continued laughter since my landing. Porters, jaunting-car boys, waiters, and even the beggars, are constantly cracking their jokes at either your expense or their own. There is a natural wit and drollery about them, that is constantly oozing out at some point or other. I shall not attempt to describe to you the beauty of this city, or of its indescribably beautiful bay and surrounding scenery, but refer you to the various published accounts of them, which you may read with as excited an imagination of their beauties as you please, without the least fear of exaggerating the reality; words cannot, canvass alone may, convey some idea of the magnificence of the bay of Dublin and the surrounding country, gently rising in terraces from the shore to the Wicklow hills and mountains in the back ground, and thickly studded with the villas and country residences of the Dublin merchants and gentry.

Having often heard my father speak of Billy Murphy, the cattle salesmaster of Smithfield, I was anxious to see his old stand, (the space occupied by the stock sold by any particular salesman, is called his stand,) and the market, if not the man himself. On going to bed I ordered the porter to call me at half-past 6, A. M., and to have a jaunting-car at the door at 7 precisely, which was obeyed to the moment; and off I set on this most extraordinary but convenient and agreeable conveyance, (that I shall take another opportunity to describe,) back to back with my driver, who quickly discovered I was a stranger, and who with the inquisitiveness of a yankee, but with great and deferential politeness, soon pumped out of me the country from whence I came; it would be difficult to describe to you the pleasure he evinced on finding I was from America; the numerous questions he successively put to me about certain places where relatives and friends of his own were settled, and the earnestness with which he respectfully insisted on waiting on me with his vehicle during my stay in the city, which I consented to, and certainly I was afterwards not sorry for it, for he proved to be a most intelligent fellow, intimately acquainted with every locality in and around the city, as well as with the persons and character of every man of any note whatever, which he took great pains in pointing out to me as we went along, and much pleasure in always accompanying his remarks with some detail of the history of the man, either good or bad, as his acts might have deserved through life. He was of great service to me, for I gained more information through him in one week, of persons, places, and things generally, than I could have done in two months, without his invaluable aid. Neither was this an isolated instance of the integrity and intelligence to be met with amongst this class of men. I was told, and believe it, that as a body, they are strictly honest, truly intelligent, full of fun and good humor, and temperate to a man. Arrived at Queen-street, which is nearly at the western extremity of the city, I soon discovered I was at the market, and alighted from my jaunting-car. The sight that here presented itself, truly astonished me. At this end, extending the length of two of our squares, is the pig market, (you hardly can hear the word hog used here,) all put into pens in separate lots, which pens are movable, and laid by when market is over, leaving the street quite unimpeded after. A fairer specimen of *fat* hogs I never saw; even in size, not averaging over 200 lbs., in shape equal to the best Berkshires, all milk white, with blooming red skins, it is remarkable that out of several thousands there were not certainly 10 black hogs in the pens. Strange as it may seem to you, I find that they are here only *in* the commencement of their pork-packing, the first of the season commencing with the New-Year. All these hogs are brought up to market by jobbers or dealers, who make a business of buying them up in the country markets, in ones and twos, from the persons who fatten and raise them, for I am given to understand, that it would be difficult to find more than *two* or *at most three* hogs fattened by any one person, and all fed exclusively on *cooked* potatoes, the refuse of the poor man's table, from the time they are pigged. When you recollect that Ireland supplies England and her navy with *all* her salted provisions, besides fully one half, I am told, of her fresh meat, the fact here stated, of how these hogs are supplied, will give you some faint idea of the extent and importance of the potatoe crop in this country, as well as the immense number of humbler cottagers and householders. When we recollect too, the quality and character of Irish lard and pork in every part of the world that it has ever reached, what becomes of the theory and assertions of all those who have so boldly stated that potatoes possess no fattening qualities, and that good meat could never be made from them? Passing through the pig market, you get into a street fully five squares long, and about 300 feet wide; the center of which, say 100 feet wide the whole way through, is occupied by sheep, which from their likeness to each other, you would suppose belonged to one man, all without exception, of the long wooled Leicester or Bakewell breed, weighing I was told on an average, (the wethers) from 30 to 35 lbs. a quarter, nett. Each lot was neatly and clearly branded with the initials of the owner, and the ewes marked with a small star or dot of tar over the tails, so that the butchers could at once distinguish them as they passed along,; I find that wether mutton is fully one penny or two cents per pound greater value than ewe mutton, and that the latter is generally withheld altogether from market during the two fall months, October and November, it being the rutting season. The sexes even belonging to the same man are in separate pens. I can hardly estimate the number in market, but from 5,000 to 8,000 at least. On either side of the sheep pens, were thickly ranged the cattle, right over the side walks up to the very windows, all of which, on a level with the street, have iron bars, and outside half-shuts, to prevent their being broken in by the cattle. Easily distinguishable from amongst the many persons around, are the shepherds and their trusty dogs, who have brought up the stock from various parts of the country; all, a stout, healthy, well looking set of men, with their frieze (the poor man's home-made cloth,) great coats and large capes, but singularly enough differing in color, according to the province they come from; but the Leinster light grey color preponderating in number by far, as from this province, particularly in the spring of the year, I am informed, that Smithfield receives its chief supply of fat stock; however, I was occasionally pointed to the dark-brown frieze from the far west, (Connaught,) and was surprised to find that few of the shepherds from there, speak any other language than the Irish; they are truly a primitive but most intelligent race of people, and their shepherd dogs little less so than themselves. I never saw finer or fatter cattle in my life, and by far the greater number, and those the fattest and most sought after, were, I was informed, fattened *exclusively* on grass, having had but a little hay given to them since the hard weather commenced about Christmas. I was here again astonished at the great disparity in numbers between heifers and bullocks; there were certainly ten heifers for the one bullock in the market, accounted for to me, by the fact, that heifers were so much more easily fattened than bullocks; the calculation is, that you can fatten five heifers for four bullocks, and that the heifer beef is much superior and of more value. Of the prices they brought, you could form no right estimate without seeing the animals, but you may *guess* as you please when I tell you, I saw many heifers driven out that were sold for over $100 each, our money, and many fat weathers that brought from $12 to $15 each, in lots of tens and twenties. The market is well supplied too with veal, brought in in long two wheeled, one-horse spring carts, with cages in the place of the bed, and carrying from six to ten calves each, many of which I saw sold for $15, and some few very prime ones as high as $20. Veal at this season, is worth on the stall from 7*d.* to 8*d.*, (14 to 16 cents,) per pound. There was also a good supply of early fat lamb, brought in cages similarly constructed, but with three tiers, one over the other, and containing from 30 to 40 lambs each—which readily sold at from 15*s*. to one guinea each; ($3 to $5 our money.) Lamb at this season here, is the greatest delicacy that can appear on the table. At the extreme end of this, is the "Springer market," where the in-calf cows, and those that have calved, stand, and are sold separately. Every thing that comes into the market, is consigned to some "salesman," of which there may be ten in all, but the aforesaid Billy Murphy sells nearly as much as all the rest together. He is the master-spirit and father of the market, having been now over half a century in that business, on the same stand, and in the same house; never, it is said, having failed to attend every Thursday during that period. (Mondays and Thursdays are cattle market days.) Though he seldom comes in on Monday for years back, leaving the sales on that day, to be attended by his assistants, of whom he has three, and a very fine young man, a son, all of whom have a minor interest in the business. Shortly after I got into the market, a man went up and down ringing a bell loud and sharp. I asked a gentleman near what it was for. "Sir, that is 8 o'clock he is ringing." "And does he ring every hour?" said I. "Oh, no, sir; you are a stranger I see. There is a rule of some 25 years standing, entered into between the salesmasters and butchers, that no cattle are to be sold to the Liverpool dealers until after 6 o'clock, in summer, and 8 o'clock in winter, at which hour notice is given, as you see, by the bell-man. This is done to insure the Dublin butchers time to make their selections, for the home consumption."

After walking up and down in silent amazement for some time, I ventured to inquire of a gentleman near me, which was Mr. Murphy's stand. "You are on it, sir," was the reply; "there he stands yonder himself, leaning on that butcher's shoulder. I viewed him for some time, and could not help admitting to myself that he was a great man;—great in stature, great in mind and intellect, great in business, *was* great, very great in politics, (he has not interfered in them though since Grattan's time,)—last year he offered to pay O'Connell's fine, $10,000, himself, for which he got great praise. He is great in wealth, too, being, it is said, worth fully one million sterling, all made in Smithfield as a cattle salesman. My father often told me that when he (Mr. Murphy,) had to fly the country in '98, for his life, on account of his tainted principles, he had but 200 guineas in the world, and since his return in 1800, he has amassed his present wealth. He is now turned of 70, tall, straight as a whip, not well looking, a very marked though pleasing and most intellectual countenance, stern to a degree when he pleases, surmounted by a head of strong, bushy, grizzly hair, not unlike that of our own General Jackson. When I found him for a moment disengaged, I went up and addressed him saying, "I am the son of John ———, your old friend and companion, sir." He drew back and viewed me sternly for a minute, and then came to me with outstretched arms, and eyes filled with tears, and shook me heartily by both hands, saying, "I know you now, I see the likeness; what is your name, my boy?' He quickly turned round, and beckoned to an elderly gentleman near by, to come to him, and said, "John Rorke, allow me to introduce you to the son of our good old friend, John ———, from America; take him into breakfast," and addressing me, said, "let me see you, my boy, before you leave the market. I want you home with me; but now I must attend to business, the business of others." I find my sheet is full, and must conclude, leaving for my next, a discription of the sumptuous breakfast table, prepared every market day by the salesmaster, for his friends and customers, and where in less than half an hour, I was introduced to some 40 or 50 of the èlite of the Leinster graziers. I shall also astonish you with an account of Mr. Rorke's farm, where under one roof, he has 350 cows tied up, giving milk, and 200 heifers tied up fattening. Think of that for an Irish farmer!

Adieu. F. I. F.

LETTERS FROM MR. HORSFORD—No. VII.

Having failed to receive our regular letter from Mr. HORSFORD, our correspondent in Germany, we have been kindly permitted to make the following extracts from one of his private letters, addressed to a gentleman of this city, dated Heidelberg, April 7, 1845:

"Through the kindness of the friend who has accompanied me constantly in my tour, I was introduced to the Grand Dukes' Director of Agriculture for the Duchy of Baden. A presentation of several numbers of the Cultivator, opened his heart to the show of every thing that he thought could interest me. Precisely what he is in office, I have not yet learned sufficiently well to define. The University of Heidleberg has a professor of Botany, and also a professor of Agriculture, and a professor of what is called Forest Science. Besides these,—(from all of whom an econom, or perhaps generally teachers of agriculture only, receive a three years' course of instruction,)—there is the so called Director. He watches over seeds, fruits, roots, and the various implements that are introduced among the peasantry, and is manifestly a man of vast service to the nation. I could not help remarking in my excursions with him, that all the peasantry listened to what he said as to an oracle. His residence is in one of the University gardens, which includes perhaps four acres. The grounds are covered with every variety of horticultural product, and immediately in the rear of his house, enjoying a southern exposure, is an extensive green house, abounding in tropical plants. His salary, like those of the professors generally, is paid directly from the government, and he has nothing to do but make science practical—an avocation to which he has devoted himself with genuine German assiduity. He is the author of several works, two little ones of which I intend to translate, if I can find time. They are upon gardening and fruit-growing, written in a beautiful, simple style, for children, and are employed throughout the

Dukedom in the village schools. He has also written a work upon the Cerealia, unexampled in Europe; and has already a work ready for the press upon cottage and out-house architecture, adapting the plans to every grade of want and means of the peasant.

"At seven o'clock, Monday morning, I accompanied the Director, a blacksmith, and a student in agriculture, to witness a trial of four plows; among which was one of American model After a ride of four miles in one of the most inconvenient farm wagons, we reached the place of action. It was a tract of land in the valley of the Rhine, about three-quarters of a mile square, owned or worked by four peasants. Near were eight pair of fine, large, fat horses, all trailing plows of the ordinary construction here: every plow having either a pair of wheels, or a kind of shoe near the clevis, regulating the depth. The plows were severally tried and condemned or approved, as the peasants thought proper. The American plow was adapted to much deeper work than they considered necessary, and its behavior created no little amusement. Uncontrolled by wheels, it shook the plowman and his pipe so inordinately that he condemned it in less than twenty yards of trial. Improvement in agricultural implements is just being introduced here, and these different models of plows will be tried by at least four or five peasants, and their form altered, if necessary to meet the unanimous opinion of them; and a manufacture commenced. I will give you in a short space, a summary of much that I learned during my visit.

"They do not plow deep here—generally not more than six inches. The soil is a clayey loam, fine texture for tillage. The cultivation most thorough, notwithstanding the imperfection of the instruments compared with those of America. No pasture-land is here permitted. The cows, which are profitably worked by the humbler peasantry, being stall-fed. There are somewhat extensive tracts of government land, enjoying a system of irrigation from a stream of ten feet wide by two in depth, the waters of which are conducted, when the season is dry, to every twenty square yards, exclusively given to grass.

"The potatoe sickness is well known here, and guarded against by perpetual changes of varieties and soils—bringing from up-land to low-land, and *vice versa*, besides replacing from the seed. Every variety of plant having its period of existence, they look forward to its ultimate extinction, and provide for its replacement. Geology gave us this great truth some time since. This is, however, too wide a field to broach.

"Whole potatoes do better than parts, and potatoes to be planted should be spread out during the winter and kept dry, to prevent the development of the shoots before planting. If the eyes are grown at all, they should be handled with much care so as not to break them off.

"All fruit is grafted. Apples and pears are the chief fruits grown by the peasantry. The trees all appear to me stinted, as if the propagated fruit was already old. They think there are identical fruits here, already 600 years old. I doubt it. The nursery is owned by a kind of county agricultural society, from which the best specimens, after five years' growth, (those from the graft,) are taken by individual members. Of the remainder, the imperfect ones are destroyed, and from the balance, all the peasants who wish them, are supplied, at the mere expense of taking them up. A man having a new variety of tobacco, or of seed which he wishes to try, sends it to the Director, and he gives it to peasants near, directing as to its treatment. The result of the experiment is communicated to the original owner, without charge.

"Agricultural meetings of the *economs* are held monthly, at which questions about every thing connected with agriculture are submitted, and among themselves committees appointed upon them. Of these, and many other matters, I took brief notes, which I will preserve, for they may yet be of service in America. The Director has paid a visit to England to compare agriculture there with that of Baden. In cattle, sheep, and swine, the English are far before the Germans; in cultivation, decidedly behind, he thinks."

Mr. Horsford happened to be at the city of Frankfort at the time of its great Fair, at which he thinks there were engaged in disposing of various articles, about 3,000 people. In this place three of the celebrated family of Rothschilds reside, in reference to whom Mr. H. makes the following remark:

"In walking about town, I passed the residences of the three Rothschilds who permanently reside here. They are fine dwellings, but eclipsed by many in Broadway. (The younger brother, whom we happened to meet, reminded me most forcibly of my friend Mr. S. just beyond the Normans-kill.) The mother of these sons, whose united wealth is supposed to equal 500,000,000 florins, or $200,000,000, still lives in the house that gave them birth, in the so called Jew-street, which is without exception the most wretched avenue I ever passed through. I refer to its external appearance. The first story is occupied by old women and men, in loathsome apparel, engaged in buying or selling old coats, old shoes, broken andirons, nails, bits of chains, &c., every thing exhibiting the most squalid features. This is, however, I was told, a safe guard, for above are indices of the wealth which enables the Jew to do so much toward controlling the commerce of Europe."

Concerning the state of morals and religion, Mr. Horsford observes,

"In Heidleberg the Protestant and Catholic churches worship in the same house, and so they do also in Frankfort—alternately, in the latter town—while in the former, they have thrown up a wall midway between. So far as I have yet seen there is very little church-going here. Indeed the fact that the best operas are always on Sunday evening, would establish what is by no means a question, that the Sabbath is a mere suspension of labor for amusement. In looking over my experience of the Sabbath thus far in this land, where science sheds so much light, my heart turns to New England and the Northern portion of the United States, as my friend Norton in Edinburgh remarks, as the hope of the world."

MR. MITCHELL'S LETTERS—No. IX.

Paris, 23d July, 1845.

Luther Tucker, Esq.—Of the capital of France there is little to be said agriculturally, except to mention the abundant supply of vegetables of every variety—of meats and of fruits. Apricots, peaches, plums, and figs, are in all the fruiterer's windows, and are no less grateful in taste than fair in appearance. Prices for such are less than in English markets, and do not greatly differ from prices at home.

Flowers form no inconsiderable object of sale in the Paris markets, and upon some particular days the value of these exposed for sale has been estimated at 45,000 francs. One or two markets are exclusively devoted to their sale.

Meats range at even higher prices than in the larger number of the English markets; this arises not so much from scarcity, as from the high duties which attend its introduction into the city, and the charges of the slaughter houses. The city duties, or *octroi*, are levied upon every article of farm produce, or home or foreign manufacture, which comes within the city barriers. No private gentleman can go out of the city for an evening ride without stopping at the gates upon his return and submitting to the examination of the officers of the city customs. The poorest peasant with his donkey, or the highest officer of the crown—all but the king—are exposed to the same treatment. Oxen pay per head, 24 francs; cows, 15 francs; calves, 6 francs; sheep, 1 franc and 10 sous. The slaughter houses, or *abattoirs*, are city property, built by order of Napoleon. There are five, and no cattle are allowed to be slaughtered elsewhere in the city. Three are on the northern border, two on the south. The duties paid for admission within the abattoirs are 6 francs on an ox; 4 francs a cow, &c. I was at the largest of these—the Abattoir de Popincourt, yesterday. The buildings, which are built in most serviceable order, consisting of stalls, slaughter houses, attics for drying skins, lofts for hay, tallow houses, &c., are within a high stone enclosure, 640 feet long, by 570 broad. 400 oxen are butchered a week, 600 cows, and 2000 sheep. The bodies of beeves are inflated with bellows made for the purpose, before removing the hide. This renders the skinning a much easier process, and leaves the fat upon the muscle light and fleecy. The meat is taken to the shops at night. An inspector is constantly in attendance, who examines the meat, and if the slightest taint is discernible, it is forthwith sent to the *Jardin des Plantes* to feed the animals of the menagerie. The courts are all paved, and by means of large reservoirs of water, are kept constantly clean. The system is unknown in England, but is worthy of imitation by any country. Paris is indebted for it, to the same mind to which she owes all her great works—the greatest mind that ever belonged to one who called himself a Frenchman.

The beef I saw was miserably poor; and all the arts of French dressing and inflation, and Parisian cookery, cannot make it for one moment compare with the roast beef of Old England. What is true of the beef is more true of the mutton. French art is in the dressing, but English art is in the making of the meat. It is the height of a Frenchman's pride to make a poor beast seem a fat one; it is the pride of an Englishman to make a poor one be a fat one. The different styles of dressing are classified and improved upon, while little attention is paid to breeds. Most of the cattle are hard fleshed and raw boned. The color and shape are of every variety. Average price of oxen is from 300 to 330 francs per head; of cows, 200 francs per head; calves 80 to 90 francs. The principal cattle market is held at Poissy, six leagues from Paris; there is nothing similar to the Smithfield market of London.

There are schools in Paris for nearly every thing but Agriculture. I am not aware of any institution existing to favor its interests.

Whoever imagines all France a sand plain, with little to interest an agricultural eye, has never been along the banks of the Seine. Putting aside all notice of the pictures given of that river valley, which would be uninteresting to your readers—there is yet a show of crops which for variety and richness, I do not remember to be surpassed by any similar extent of surface in England. It is, however, owing more to the richness of soil, than to practice of the arts of cultivation. I saw no evidence of drilling or draining, though my view was necessarily very superficial; and such implements as came under notice, were of the most clumsy and antiquated construction. The lands passed were farmed in small parcels, and not unfrequently five or six crops were seen growing in the same fields. Rye, barley, oats, wheat, and potatoes, are grown in nearly equal quantities. With the exception of some of the alluvial flats devoted to grass, I do not remember to have seen more than five or six acres devoted to a single crop. This minute subdivision of lands, presenting each its peculiar product, gives a singular appearance to the country, and as the road ran over some eminences, along the banks of the river, offering to view a wide extent of territory, the effect was wonderful. The wheat heads are just catching the color of gold, the oats had taken on the whitish delicate green of full bloom, the rye was white, and here and there the reapers, men and women, were cutting or binding it; contrasting with it, was the glossy hue of long lines of Swedes, or the rich deep green of the tangled tares, or the waving and bristling beards of the barley. All these colored crops, in stripes or in squares, covered the whole banks; sometimes stretching down to the very brink of the water, and sometimes running away—their distinctive shades not lost in the distance, far over the opposite hills.

Of the character of the farm buildings, and the domestic habits of the laborers, I can speak more fully in future. One thing is at the outset discernible—great lack of that rural taste which belongs so peculiarly to the English country liver.

My letters are written from the spot, and of the spot I happen to be in; hence little method is observed. While traveling, the same scattered notes must be expected. Should circumstances direct an after continuance of correspondence more order will be used. Meantime, I remain Yours, truly, D. G. M.

Domestic Correspondence.

A WORD OR TWO ABOUT BEE HIVES.

Luther Tucker, Esq.—In making hives for bees, there appear to be two important objects to be gained—viz: Security against the moth, and to obtain the honey without injuring the bees. Almost every new invention attempts to perfect one or the other of these objects. Upon observing these little insects in their wild state, we find them content with almost any clean cavity which contains sufficient space and affords them security against the weather. Learning this fact, it behooves us to give them as simple a contrivance as possible to combine comfort, security, profit, and neatness. They want no "patent fortified palaces," but a home. Give them a convenient and neat one, and they will fortify it themselves against all intruders. I have for several years kept bees, and have taken an interest in obtaining suitable hives for them, have examined a great many patent constructions and believe the following simple one, which is free to all, combines all the advantages of any of the complex patents.

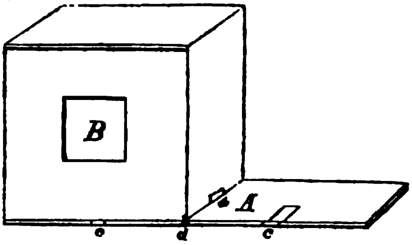

Fig. 80.

Fig 80 represents the stock hive placed upon a movable bottom A, which can be taken out and cleaned at pleasure—B B B, are glass windows, with shutters—c c, show the entrances which are in the bottom board—d, slide made of small hoop iron, working in a saw-cut in the side of the stock hive and controlling the door e, which connects the two hives. When the stock hive is filled, place a brick against the entrance c, set another hive on A, as in fig. 81; draw out the slide d, and the bees finding no outlet excepting through the new hive by the door e, will pass out that way and soon commence building in the additional hive.

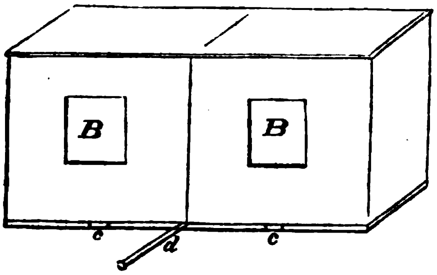

Fig. 81.

These hives are ten inches in the clear in length, breadth, and height, and if made in a workmanlike manner, and painted, are an ornament to any grounds, and will secure all the honey the swarm can spare, to the owner, without injury to one bee.

In regard to the moth, I would remark, there has not one hive come under my observation which offers much security against them. To stop their ravages we must prevent them from laying their eggs about the hive; to effect which the following simple plan (which I see some of your correspondents have noticed,) and which I have tried for the last three years, is perfectly effective:

Take a vessel with precipitous sides, a tin cup or porringer for instance; fill it about half full of mild vinegar or cider, place them at nightfall on the benches or hives, about one to each, and remove them early in the morning. Every miller that passes that way will be found in the liquid. By persevering in this course during the months in which the moth lays her eggs, all loss from er ravages may be prevented. **Barclay White.**

Pemberton, N. J., 6 *mo.* 13, 1845.

SOUTHERN AGRICULTURE.

L. Tucker, Esq.—Our new postage bill, will, I hope, enable you to receive even more communications than heretofore, though we cannot complain of you in that respect. Hereafter many will pay their ten cents who have never written you, because unwilling to meet the heavier tax.

I am always gratified to read the articles from your southern correspondents, and hope your paper, though located so far north, will prove as much a southern as a northern conveyance of information. The benefit it has already conferred on the agricultural community, is now duly appreciated, but we hope ere long, in addition to such matters as are common to all who are engaged in agriculture, to find valuable information adapted to our own soil and climate.

The agriculture of the south and north, must, under present circumstances, be essentially different. At the north, you hold for instance, a certain quantity of land, and having to hire the labor necessary to cultivate it, and to conduct all proceedings by regular calculation of cost and probable return, you can thus ascertain what amount of land you can work to profit. With us it is different. Land is much cheaper. We have a certain number of negroes, and by this we regulate our animal force. Now we wish to employ these laborers and horses or mules to the best advantage, and at this time it is a question of some difficulty and doubt. If, for instance, we plant only such a quantity of land as we can manure, we must turn some of this force into other channels, and it is a matter of but little doubt, that until some of this labor can be profitably abstracted and applied to manufactures, the improvement in the yield of our cleared lands will necessarily be slow, and the bad system of continual clearing land and waste of timber for fencing, will probably continue. The attention given to collecting manure, is certainly becoming more extensive, and some force is now applied to this purpose which heretofore has been given to working the crops; but this is necessarily limited, and it is not possible to manure any large proportion of our land as it should be. A little sketch of our method may not be amiss.

We keep then, as large a stock of cattle as we suppose we can winter on the offal of our crops, viz: The shucks, straw, &c, (The blades or fodder as we call it being necessary for our horses, and where near a market for sale,) and in the fall, when our corn is gathered in, they glean the fields of the tassels, bits of blades, late and unripe stalks, &c., and the little grass and pea vines, that may be found. These cattle are generally penned at night and given access to the corn shucks and straw, and supplied (by good farmers) with plenty of oak leaves, pine straw, corn stalks, and any litter they may find.

The stables are cleared out now and then, and the manure spread in the cow pen, and fresh leaves given to cover it. It is piled up some time in January, and in March hauled out to our cotton and corn crops; to the latter applied at the rate of about three loads (two horse loads) to the acre, which admits of a good double handful to the hill, the corn being planted 4 by 4, or 5 by 3, or some such distance. This, after being applied to the land every year, will in the course of a few years improve it somewhat. My own practice is to put what manure I have in the spring as mentioned above, and all that I can collect in the fall is given to the same field for wheat. After the wheat is cut, a considerable growth of weeds and grass takes place, and is left to decay upon the ground, to be turned in, if opportunity offers in the fall, though but rarely before spring. I plant no cotton, (but little made in this district,) and the land again has to be put in corn; sometimes in oats. We plant the cow pea between the hills of corn; generally at the second plowing, and this I think a very important addition to our crop. The peas are picked, and the leaves and vines, I think, if not eaten down by cattle, tend to improve the land. The cow pea is a dangerous article of food to all stock when fed in too great a quantity in a raw state; but after the field has been picked over, and only such quantity left as the stock must *travel* a good deal to obtain a meal of, it is very fattening; and helps to put our hogs in fine condition before putting up to fatten.

Those that we are able to gather in by hand are used for feeding our milch cows. They are boiled and eaten very greedily by most, increase the quantity of milk very much, but (what is not generally known,) ruin the butter. For hogs, *boiled*, they are unsurpassed even by corn itself.

I always devote a piece of good ground on which I drill the cow pea—often after rye or wheat has been taken, and when the pod begins to mature, have the vines cut or pulled up and cured as the finest food for our milch cows that can possibly be obtained by us; but they must be properly cured so as to save the leaves, which like clover and lucerne are extremely likely to be lost.

We find that we are so limited in our articles of culture, not being able to cultivate clover or any of the grasses, that a system of rotation for more than three years, cannot well be carried into effect. The quantity of land planted in cotton or corn at the south being necessarily so much larger than small grain, roots, &c., will always interfere in this respect. We find it difficult then, to arrange any regular scheme on paper, but must alternate as convenient. Corn, cotton, wheat, rye, oats, and rest, must be managed as judiciously as we can. The last year I sowed a piece of ground broadcast in cow peas intending it to be turned in for the benefit of the land; but upon reflection, in the fall, when ready to plow it in—reflection caused by casting an eye upon my cows, who would have said, if they could speak—"Ah why not pull these, *we* would thank you much, and return them to you again in the stable yard, besides getting the benefit of them ourselves." As you may suppose, they were pulled, and my cattle benefited much by the exchange. Whether it would have been more judicious to turn them in, or use them as I did, I think exceedingly questionable. Now sir, if we are disposed to devote a little labor and seed peas towards improving our lands by sowing them on our fields in the year of rest, or after wheat, would it be better to gather the produce to feed to our stock, and even increase our stock to consume it, or plow it in? It would hardly require an increase of stock on even our best plantations, as we all keep more than we can *well* feed in winter. In summer they do well in old fields and swamps.

There are many other considerations that I would suggest, as going to show the essential difference between the north and south, as incidental to our peculiar institution, in contrast with the hired labor of the north, the merits and demerits of which institution, I hope will never be discussed in your paper.

I have extended this to an unwarrantable length, but if you think it worth an insertion I may address you again; if not, it is but a spare moment wasted, of which my health throws many upon my hands within doors.

Greenville Dist., S. C., July, 1845. J. W. G.

Cure for scours in sheep.—First take your sheep-shears and tag them, as the filth that adheres to them in such cases, seems to augment the disease. Secondly, pick up a piece of straw or hay, and pick open the issues, as you will find one on the front of each foot, immediately above the division of the hoof, which is generally if not always closed when the animal is thus diseased. Be very careful not to break the skin. It may in some cases be necessary to open them twice a day for two or three days, but once will generally effect a cure. Should it be necessary to administer medicine internally, take good rennet prepared just as the cheese-makers use it to set their curd for cheese, and give from four to six table spoonsful, according to the size or age of the sheep. To a lamb eight or ten months old, I give four spoonsful, and if it is not well in twenty-four hours, I repeat it, and I always cure. I keep the article on hand in a bottle at all times. **Reed Burritt.**

Burdett, Tompkins Co., N. Y., July, 1845.

NOTES OF TRAVEL IN THE SOUTHWEST—No. VI.

BY SOLON ROBINSON.

[Mr. Robinson commences this letter, by informing his readers, that on the 12th day of February, the date of his letter, the peach and plum trees in the part of the country from which he writes, (the north portion of Mississippi,) are in full bloom. He states that the region is quite new, it being "the much talked of Chickasaw purchase," and that the people live mostly in log cabins. The land is described as being generally good for cotton, but in Mr. R.'s opinion, an investment of more than 37 cents per acre, for a large portion of it, would not prove profitable, on account of the extremely low price of cotton. The course of cultivation generally practiced, is represented as very deteriorating. The land is mostly hilly, and by injudicious management, is said to be greatly injured by washing. Mr. R. says he passed a field in the north part of Yallabusha county, in which he saw "twenty plows, each drawn by a single horse or mule, and some of them pretty poor at that." This land, he says, "was to be planted to corn without any further plowing, and this certainly was not two inches deep in the average." The soil is said to have been originally about six inches deep, but by this mode of barely "scratching" and loosening the surface, it is in many cases nearly all washed away, leaving the fields cut up by deep gullies. But that this wasteful cultivation, which Mr. R. so much deplores, is by no means universal, will appear from his description of some beautiful and well-managed plantations—to one of which he introduces us by a relation of the following pleasant incident, which, though somewhat *elongated*, we think our readers will be interested to peruse in his own language—Ed.]

Finding so little of the spirit of improved husbandry, and so few with whom I could feel as though I was with old acquaintances, the pleasure of a circumstance that happened to me on this evening cannot be realized by my readers, by any description that I can give; and can only be judged of by other travellers who after toiling despondingly through darkness and difficulty, suddenly find themselves by the warm hearthstone of a new found and unexpected friend.

The day had been warm and balmy as a New-England mid May day, the roads good from the effect of good weather. The blossoms, as I have before remarked, making the air fragrant; garden vegetables green growing in luxuriance; while hundreds of negro laborers, busy in the fields, made the world seem gladsome with their cheerful laugh and jovial song. Yet amid all, I could not feel gladsome myself, for I could not but see ruin following in the footsteps of such a system of cultivation as I too frequently witnessed. In this mood of mind, I passed Coffeeville, the county seat of Yallabusha, just before sun down, and as the town, which is built upon almost as many hills as ancient Rome, offers but little inducement to a stranger to spend a night, I passed on with the intention of stopping at some rodeside house, a mile or two on; but after passing that distance and seeing no more pleasant prospect ahead, I made inquiry of a passing negro, and was assured that I should find no stopping place "this side of Tom Hardiman's, and dat was six mile mighty bad road," which I was bound to get over or stick fast in, with a tired team and in a dark night. On, on, I went, over hills, stumps, gulleys, streams, mud, and in the expectancy of a very poor supper. How I was at length disappointed! Although I found the house a low log cabin, built after the universal, never varying pattern, of two rooms with a broad hall between, I was struck with surprise, and at once impressed with the idea that I should find something out of the common course of things within. Reader, would you know why I received this impression in advance, and that so suddenly, and only from the glimpse I caught by candlelight, as the host advanced to answer my call. Here it is. From the house, yes, from that rude, block log cabin to the front gate, extended a neat arbor for the support of twining flowers, climbing vines and roses. Did you ever see such an outward sign, without feeling at once assured that taste, intelligence, neatness, and comfort dwelt within? At all events I found it true in this instance. In far less time than usual, when waiting upon a negro cook, I was seated at the supper table. The neatness and profuse variety of the dishes with which it was loaded, were rendered still more palatable by the presence of just such a woman as might have been expected from the outside sign which I have mentioned, and the beauty of whose face was undoubtedly improved by the healthful glow that she had acquired that very day by her personal superintendence of the cultivation of her flowers. But weary as she may have been, and late as was the hour, she did not feel herself at liberty to neglect the tired and hungry traveller; and I ate a far better supper that night in "Tom Hardiman's" log cabin, than I had before eaten in far better houses, where better things might have been looked for, only that the lady did not cultivate a flower garden.

Although I am no great believer in clairvoyance, I certainly witnessed here a wonderful case of "guessing," considering the guesser was a Tennesseean instead of one of the "guessing nation."

During supper I observed that I was undergoing a most rigid scrutiny by Mr. Hardiman, who on observing that I noticed him, began to excuse himself by saying that he was struck by a very singular impression which he could not account for, and he had been examining my face to see if he could not recognize the features of "an old acquaintance," whom he had never seen or known, except as he had seen his features in his letters to the Cultivator and other agricultural papers; and though he had never received any intimation that the person he alluded to was in that part of the U. S., he was irresistibly impressed with the idea that I was the man.

My curiosity was excited; my toilsome evening's ride was not forgotten, but looked back upon with pleasure. I had at length found an "old acquaintance," and I did not hesitate to ask him "who he took me for?" And when I assured him that I was the very individual he had guessed I was, I have never met with a warmer reception or apparently given more pleasure by a visit to any real old acquaintance in my life. Somewhere along toward the last end of the night I laid down to take a nap, and in the morning after breakfast, saddle horses were brought to the door, upon one of which I spent the forenoon in looking over the plantation and examining the first specimens I had seen of "side hill ditching," and "horizontal plowing," of which I shall speak further hereafer.

Mr. Hardiman has discovered a fact that the former proprietor of the place was not aware of, and I speak of it here because there are a great many others who have not yet discovered it. And that is, that land lying at the foot of the hills, that receives all the soil that is worked down from them, if once cleared of timber and brush and brought into cultivation, will actually produce cotton. True, it does require a little more labor to clear it than it does the thin timbered and thinner soiled hills; and another thing, it wont wear out, and give the owner an excuse to migrate. When Mr. Hardiman first commenced, he was laughed at by some of his neighbors for trying to cultivate a swamp. But a few ditches to straighten the branches and lead off the standing water, soon proved how much more valuable this kind of neglected land is, than the poor washing hills. Here I saw another curiosity. Hands employed scraping every hole and corner around the buildings and yards for manure.

The food for the field hands is all cooked at the kitchen, and dealt out without weight or measure, and they have all the bacon, corn bread, and vegetables that they need.

At dinner to-day, Feb. 15, I feasted upon some of the largest and best heads of lettuce I ever saw, grown in the open air, and a greater variety of vegetables than I have seen since I left St. Louis, one of which was the Jerusalem artichoke, which, boiled and mashed up like turneps, makes an excellent dish. I presume many of your eastern readers do not understand that the *Jerusalem* artichoke is a kind of vegetable that they have long been acquainted with, and which can be found in some by-corner on half the New England farms. They are a valuable crop, being raised for hogs. Mr. Hardiman has raised Irish potatoes from the same seed, for eight years, and thereby proved that it is not necessary to get new seed from the North every year, "'cause it runs out.' He plants in November, and they ripen in May, but he lets them remain through the summer in the hills.

One fact in regard to his management of negroes might be pursued by parents toward children, as well as masters towards servants. *He keeps them at home;* and he very rarely has occasion to punish.

Having learned that the name of the post-office here was "Okachickama," I found by reference to a memorandum, that I was in the neighborhood of another old acquaintance, JOHN T. LEIGH, Esq., and in the afternoon we rode over to his house, and found him reading the S. W. Farmer, where he had just discovered that I was on my way to Mississippi, and expressing his regret to his family that he should not probably meet with me, as he lived off of any leading road. His astonishment and pleasure may be "guessed" at, when Mr. Hardiman introduced the very individual whose name was then upon his lips.

I had only come for a short call. *I stayed two nights.* Who ever escaped Virginia hospitality in less time. How these meetings and joyous welcomes, and show of respect from every member of a family, do sink into the heart and search out every kind feeling, and strengthen every emotion that prompts in the labor of doing good, and promoting the happiness of our fellow creatures. What other recompense can be so dear to one devoting time and talents to increase the knowledge, and consequently add joy to the mind of his universal brethren, as such interviews as the one I have just described and am now describing. Have patience with me, my northern friends, if I appear tedious, but I am anxious to paint you a picture of a Mississippi planter, in which you may see all the little minutiæ of his household; so different, so wonderfully different from your own.

Mr. Leigh works about 35 field hands, including blacksmiths, carpenters, spinners, and weavers; the latter only working in the field in "picking time"—that is, when the cotton is ripe and ready to gather, which in the way of hurry, answers to the time of your harvest. He owns about ninety negroes, old and young, all of whom live in families by themselves, in very comfortable log cabins, some of which are neatly furnished and provided with household matters and things, and others that are exactly the reverse, and look just like some white folks' houses. These families have a weekly ration of three and a half pounds of bacon, clear of bone, for each member, except small children, who are furnished with food in proportion to size and numbers. About a peck and a half of meal is also given, and more, if they can use it without waste, and sweet potatoes, turneps, squashes, onions, green corn, and various other vegetables, as well as melons and peaches, by untold quantities; and all show by their looks that they are full fed and well clothed.

"The quarters," that is the place where the negro cabins stand, are away from the dwelling house, and are so arranged as to be in sight of the overseer's house, so that he can always have an eye to anything going wrong. For negroes, like children, want a deal of careful watching at all times.

When the hands go to their work in the morning, all the children are taken to the nursery, where they are taken care of and fed by a woman who does nothing else. Women never go to the field until the child is a month old, and from then till weaning time, return to nurse them at stated times. Hands either take their breakfast and dinner to the field with them, or have it sent out in little tin buckets, kept for the purpose.

Mr. Leigh has 640 acres of land in cultivation, including about 80 acres taken up in yards, gardens, orchard, &c. Of the balance, he puts 200 acres in corn, 60 or 70 acres in oats, and the remainder in cotton, upon which he made for the last three years, from 125 to 135 bales a year. [A bale of cotton is always 400 lbs.] He put up last year, 16,000 lbs. of bacon, for the use of the plantation, and intends in future, to keep up a supply. This being the first year of the ten since the commencement of the plantation that it has provided its own meat.

He still continues to clear some land every year, and particularly to clear up all the "hard spots" that were left at the first clearing; straightening the crooked channels of branches, and filling up and cultivating the old channels; draining little ponds, &c. But what is of vast importance and necessity for every Mississippi farmer to learn and practice, he has the whole plantation under a complete system of hill-side ditches, by which he wholly prevents the light soil from washing away, and adds greatly to the value of the land, and the annual amount of the crops.

Now if any body should ask "what are hill-side ditches?" I have to say, that the whole of all the numerous hill-sides are ditched with one or more ditches, as may be necessary to take up and carry off all the falling water, almost on a level, and winding round till an outlet can be found to discharge it without injury to the land. These ditches are laid off by a level, and are intended to remain permanent fixtures; and all the plowing has to conform to their shape, and as a matter of course, utterly annihilating "straight rows." This great and indispensable improvement upon Mr. Leigh's farm, was done by his very intelligent son, Randolph, who until the present year has had the sole charge of overseeing the plantation; thereby proving, that one rich planter's son could make himself a useful member of society. I wish I could say all sons were like this estimable young man—particularly my own. In this connection, I must not forget to mention Mr. Leigh's son-in-law, Dr. Town, whose plantation is adjoining, and cultivated under the same system, and which he wholly oversees himself.

Mr. Leigh works 17 mules and horses, and three yoke of oxen; has about 200 hogs, 50 head of cattle, 70 sheep, which are sheared twice a year, and from which he makes all the light negro clothing,—he also makes all the cotton clothing used.

He hauls his cotton about seven miles, where it is shipped on steamboats in high water, upon the Yallabusha river, which empties into the Yazoo, and thence into the Mississippi, above Vicksburgh. All his supplies come through the same source, even a year's stock of flour, which he gets from Richmond, that being the only kind that will keep good through the summer. Who can tell why? It is important to Ohio millers, whose flour can always be had considerably cheaper.

Mr. Leigh has what but few others in this region have, an abundance of stone. It is a mixture of iron and sand, very hard, and is found in layers, with natural smooth fractures, that fit it for building purposes. It stands fire when the edge is exposed to the heat, but if reversed from the position that it is found in, it scales off and flies all over the house like grape shot.

Mr. Leigh is very successful in keeping his sweet potatoes packed in cotton seed, in a well ventilated room; and as a very strong evidence that his negroes do not suffer much want for food, I observed that this potatoe house had no fastening to prevent them from helping themselves if badly pinched with hunger.

Now I think I hear some of my eastern fair readers exclaim, "Well now, I do wish he would tell us what sort of a house this Mississippi nabob lives in?—very splendid, I dare say. Oh, I wish I could see it." Well, madam, it is a common double log cabin, with a hall between. "Why, you don't mean to say, that a man with such a farm, and so many negroes, lives in such a house as *that?*"

Oh yes I do, and very comfortably and nicely he does live too, for he has a wife—ah, a *wife*, madam; not a mere piece of household furniture, such as your boarding school bred farmer's daughter will make—totally unfit for a farmer's wife. "Well now, do tell me where they all stay in such a house as that?" Why, madam, there is another cabin back in the yard—that is the kitchen—no matter that it is so far off the eating room—it is Mississippi fashion; and there are plenty of negroes to run back and forth; and here is another building—that is the smoke house; and there is another, that is the store room; and there are two or three more, those are lodging rooms. No matter that they are ten rods from the house—it is the fashion—and as for that, convenience and comfort is ten times worse sacrificed every day than it is in these household arrangements. True, such arrangements would not suit us at the north, but here use and negro labor make the difference. I have seen in more than one instance, the wood pile more than 40 rods from the house, and "the spring" twice that distance—two inconveniences that a yankee could never put up with. He would sooner have "the well," as well as the wood pile, both in the road, right in front of the door of the house, that almost stands in the road too, to say nothing of all the carts, plows, and sleds, also in the road, "between the house and barn," it is so convenient.

But we have much more yet to see of Mississippi life; and circumstances compel me to take a hasty leave of this fine family—this "fine old Virginia gentleman,"—and now for a little season I again bid you a kind adieu.

SOLON ROBINSON.

TRANSACTIONS OF THE N. Y. S. AG. SOCIETY.

"We will not be understood as condemning the volumes before us. On the contrary, we give great credit to the State Society for the work. At the same time we unhesitatingly say, that they contain much that had better been left out, for it has no connection with agriculture; and some which had better never been written, for it is full of error, and as such renders the authors and the Society liable to censure. The latter appears under the sanction of science, whilst true science will reject it.

"We think the Society have erred in the choice of men to deliver the addresses at the annual Fair. Not but they are men amply sufficient to do justice to the high claims of agriculture; but it is a subject which needs not eulogium nor praise. These it receives from all men, and its highest honor is the prosperity and happiness it confers upon a nation. The farmer needs instruction, not praise; and we submit it as our humble opinion that an address filled with good practical information—examining briefly the principles and the practice of agriculture, and setting forth inducements to advancement in knowledge of the art, would be vastly more useful to the thousands of hearers, than poetic rhapsodies. And in saying this we are conscious that we do not speak unadvisedly. We know it to be the opinion of a large—we might perhaps say—the largest portion of the farming community who attend these Fairs. They are common sense men and want to hear common sense."

MR. EDITOR—The above are extracts from a review in the last number of the "American Quarterly Journal of Agriculture and Science," of the "Transactions of the New-York State Agricultural Society, for 1844." I would refer the reader to the entire article, which he will find in the number for July, August and September, page 109, and at page 114 he will see the portions of the article alluded to.

If I have the right to review a *reviewer*, as a disinterested person standing between the reviewer and the work he comments upon, I must say that I have not discovered, to the extent he has, the defects alluded to; but that as a whole, I have read the last volume of "Transactions of the New-York State Agricultural Society," with both pleasure and profit; and being a practical man, I have no fears but the farmers of New-York will receive it with an interest equal to mine. It is true that every article in it is not unexceptionable, and I would like the reviewer to point out a book as a whole, that is so; still, although I will not say that it could not have been made better, yet I do say that after having began the volume, I could not lay it down until I had read it carefully through, and many of the articles I satisfactorily re-perused. The reviewer admits that as a whole, it may be well enough, although he does not use these words; but this is rather the conclusion to which he arrives; but if he bases his judgment upon the opinion he has formed, of which the above extracts are the exponents, then I have something to say in reply. In the first place he says—"that they," (meaning some of the articles,) "had better never been written, for they are full of error, and as such render the authors and the society liable to censure. The latter appears under the sanction of science, while true science will reject it." Now I object, totally object, to these wholesale remarks, as condemnatory of a single article in the book, and in my opinion, they are much more liable to "censure" than any thing in it. To which particular article or articles, he alludes, you are left to conjecture. If there is any one which true science rejects, it was his duty, standing in the position he does, to have pointed out, not only the article, but the error, and thus made us at least the wiser for his labor; but he assumes too much the attitude of the schoolmaster—to which, possibly, his situation as an editor of a Quarterly Journal of Agriculture may entitle him—who, upon entering his school, thinks he had better begin with a flourish of the whip, and at the same time condemn and praise just sufficiently to put the boys in proper awe of their teacher. I have no objection to assign this place to the Journal, if its editors wish to assume it; but I insist upon it, that they are bound as critics, as well as men of science, to point out defects in communications they comment upon, and thus give the authors of them an opportunity to sustain their opinions if tenable,—if not, to become at least wiser from the instruction that ought thus to be imparted. Until, therefore, the errors in these communications are pointed out and controverted beyond a doubt, I shall have to remain of the same opinion in regard to the Transactions as a whole, that I had formed previous to having seen the remarks of the reviewer.

As to the opinion he expresses, "that the Society have erred in the choice of men to deliver the Addresses at the annual Fair," I must say that I think *he*, not the Society, have erred. I was surprised at the whole tenor of his remarks on this subject, and least of all did I expect it from a man who has placed himself on an elevation, and must admire talent wherever it is exhibited. The address of Mr. Bancroft, to which the reviewer seems to have particularly alluded, at the last Fair at Poughkeepsie, seems to him to have been highly exceptionable, because it was not sufficiently practical to suit his taste. And upon this subject he is "conscious he does not speak unadvisedly." Now I assert, just as confidently, that the address was highly acceptable—was exactly suited to the occasion, and was received with much more than common gratification. Surely he could not have been present at its delivery, nor witnessed nor heard the enthusiasm with which it was received. I, fortunately, was present, and have often since reverted to the scene and the occasion, with unmingled pleasure—nay, more, I have read the address at least twice since its delivery, and have come to the conclusion that no man who attempts an address at a coming state Fair will make it until he has carefully read over Mr. Bancroft's. It was, in my opinion, just what it ought to be, both in matter and form of expression, and it is saying not too much of it, that as a piece of composition, it is a model of beauty, force and elegance. That address will be read wherever the English language is admired.

But the reviewer thinks it was not sufficiently practical as to matter. Now, permit me to ask, if upon an occasion of a State Fair, any remarks but general ones would be acceptable to the thousands assembled? and what part of that address would he have omitted without marring the whole? The subjects touched upon were highly proper in their kind, and there was enough of illustration to make it highly acceptable to the audience. If the reviewer objects to the whole matter and manner of the address, conceding it high merit simply as a performance, then I take issue with him, and say he is mistaken, and upon his own grounds as a practical man. What is the object of these Fairs? In the first place, to draw an audience. Then the object is to obtain a man to deliver the address whom the people generally would like to hear, and whose name will aid in attracting an audience. With that view, Dr. Nott, an accomplished and well known rhetorician, was called upon to deliver the address at Syracuse. Gov. Seward that of the succeeding year at Albany. Daniel Webster and John Quincy Adams were requested to speak the year after at Rochester, and acting under the same impulse, Mr. Bancroft consented to deliver the address at Poughkeepsie. Now, although we were disappointed in not hearing either Webster or Adams in Rochester, still there is no doubt the reputation of all these gentlemen aided very much to give eclat to these fairs. And it must not be objected that because they were not *practical* farmers, that therefore they were not the proper persons to officiate on these occasions. Their reception by the multitudes assembled, and the results, show that they were the very men of all others that should have been selected, and as long as the Society consults its real interests at the State fairs, its officers will select the most prominent men they can find, whether they are farmers or not, to deliver the addresses. But I totally object to the delivery of a practical address at such a time and on such an occasion. When I attend State Fairs and see collected around me the best of every thing the earth or man can produce, I want an orator who is competent to describe the scene, and who can wake up my enthusiasm to a proper conception of the dignity of my employment, and show how much I owe to the talent and ingenuity of others. At a time like this, when the choicest productions of nature and art are around you, with all the embellishments that taste or genius can add, who would think of listening to a man who was lecturing upon the number of potatoes you should put into a hill, the size of a barn door, or the qualities of a pig, in preference to one who, with better judgment and with greater intellect, spoke in glowing terms of what man had done to renovate the soil and improve his condition. At the meeting of Farmer's Clubs, in social converse, or County Fairs, give more practical and useful lessons; but at State Fairs, I would join the *dulce* with the *utile*, and engraft pleasure on profit. If we at all times and on all occasions are to have nothing but the useful, three-fourths of the interest of our State Fairs is gone. By this rule we must exclude all the beautiful productions of our Maker and his agent, man, and confine ourselves to the exhibitions of vegetables, or of animals only. I cannot believe the editor of the Journal such a cynic, nor that he, when he reflects and looks around him, can be disposed to find fault with the beautiful productions of our Creator. Surely he meant these for the enjoyment of man, and on proper occasions, and when we have around us these beautiful displays of his goodness and munificence, it is proper and right that the beauty and force of oratory shall swell our hearts and warm our feelings to a just comprehension of our manifold and rapturous blessings. SENEX.

NOTES OF A BOTANICAL TOUR—NO. III.

MR. TUCKER—On the 24th April, 1842, we started on horseback for the Smoky mountains, at whose distant tops over which the clouds were almost continually rolling, I had often gazed during the past few days with longing eyes. I was anxious to be on those tops, to have the glorious mountain prospect—to become acquainted with their structure and vegetation—and above all, I hoped to discover something new. None but the botanist knows, none but the botanist can feel the joy which the sight of a new plant gives, especially if he be its discoverer. At such times he sees beauties unseen by others—tastes pleasures unfelt and unknown to others. What wonder then, that those who have a taste for natural history, rarely, if ever, are addicted to idle or dissipated habits, and for that very reason above all others, parents should cherish a love of nature in their children, resting assured that such love will make them happier and better.

We were provided with pack-saddlebags filled with paper for containing the plants; also port-folios and tin boxes. Dr. Rugel had a large, square tin box strapped to his shoulders and a straw hat tied beneath his chin. Rugel's horse was named Fox. I mounted first and rode on, but soon heard the clattering of hoofs, and Fox dashed by, with Rugel crying "whoa, Fox! whoa, Fox!" his hair streaming in the wind, with tin box and hat dashing up and down at every jump the horse made. I was reminded of John Gilpin's famous race, yet fearful of the result, refrained from laughing, until about a mile farther I overtook Rugel, who had stopped Fox in ascending a steep hill. Equipped as we were, the people along the route probably supposed we were pedlers, who often travel on horseback through the south-western states. The agriculture of this state was in a low state—the people seeming to care for little else than to raise enough bread stuff for their own consumption, depending mostly on raising domestic animals to obtain money. We spent the night at Sevierville.

Early next morning we continued on in company with Drs. Hill and Hammer, who had kindly volunteered their services, and laid in a good store of bacon, corn bread, biscuit, flour, and coffee, with blankets for encamping at night. Our route was along the clear waters of the Little Pigeon river, which forms a fertile and picturesque valley among the mountains, and unites itself with the Big Pigeon river at Sevierville. We crossed the stream some 25 or 30 times, along whose banks the large shrub *Stuartia pentagynia* grew abundantly, with the last year's fruit still attached to its limbs. The *Hamiltonia oleifera*, (oil nut,) in flower, occurred frequently, and on small islands in the stream we first observed *Diervilla sessilifolia* (nobis.) Specimens of this shrub in flower had previously been sent to Torrey & Gray, by the Rev. M. A. Curtis, of N. C., and by them it was considered a variety of *D. trifida*. An examination of the capsules convinced Dr. Gray that it is a different species, and at his suggestion, I published it. We arrived at Stephen Hoskin's Log cabin, 18 miles from Sevierville, about noon, when the thermometer stood at 81 degrees in the shade. Here we left our horses and proceeded on foot by a path along the wild, foaming, noisy Little Pigeon, whose rocky bed was often forded. Six miles from where we left our horses we struck a path to the left, quitting the river when two miles farther; by ascending a good deal and descending some, we reached a small cove where epsom salts were made the preceding summer. On the route we found the true *Phacelia fimbriata* of Michaux, which had not been found by Botanists since Michaux collected it on the mountains of North Carolina. In several places it grew in great profusion, having delicate white fimbriate flowers. Pursh supposed a very common but different species (*P. Purshii nobis*) with blue flowers, to be Michaux's plant, and subsequent botanists were led into the same error. Along the small mountain streams grew the *Diphylleia cymosa*, (Mich.,) in flower. This is very common in similar situations through the mountains of North Carolina. The same is true of the *Saxifraga erosa*, which we first met here. Along the mountain sides were several trees, two to three feet in diameter, of *Halesia tetraptera*, in flower, attaining a much larger size than *H. diptera*, (snow drop) which is common in the vicinity of streams, through the south-western states. It was sunset when we reached the small hut which had been used by the workmen while experimenting on the manufacture of epsom salts. We soon had a blazing fire, and with mountain appetites partook of an excellent supper. The thermometer had fallen to 32 degrees. The open cracks of our dwelling and two blankets afforded but a poor protection from the cold. However, I managed to get in the middle, and slept well, on a stone floor, with one blanket above and one beneath.

26th. A cold, misty, rainy day. We were greatly disappointed on account of the weather. The cove was surrounded by high, rugged mountains, whose rocky summits were often destitute of vegetation, over which the stormy clouds were continually rolling. It was only through occasional openings in the clouds that we had a glimpse of the rugged peaks. During a short cessation of the storm we ascended about two-thirds of the way up the mountain, to the place where the sulphate of magnesia was obtained for the manufacture of salts. Here beneath a high ledge of mica slate we obtained beautiful specimens of sulphate of alumina in botryoidal masses and capillary crystals. This beautiful mineral was very abundant, and the sight of this alone was a sufficient compensation for the toil of ascending the mountain, through the cold, misty rain. We were up among the clouds, which came tumbling over the mountains, down whose sides they descended until the air was sufficiently dense, when they floated, to be dissolved in rain or driven by the wind against the adjacent mountains. We returned to the encampment cold, wet, and hungry. In the afternoon, Dr. Hammer and I attempted to ascend a long, narrow, rocky ridge, leading up to one of the main summits. After much toil in crawling over and under dense thickets of *Rhododendron maximum* and *Kalmia latifolia*, with which the lower portion of the mountain was covered, we emerged into an open space consisting of loose mica slate rocks, partly covered by a low branched shrub, (*Zeiophyllum serphyllifolium, D. C.*) It grew from one to two feet high, and was covered with white and pale red flowers, a distant view of which had caused us to ascend the mountain. Here my companion looking round and seeing large gulfs on both sides, said he was afraid to proceed farther, and descended. The ridge was so narrow that at a point some 15 or 20 rods farther, there was a large hole through it, which we had seen during our forenoon's excursion. To reach this point I proceeded, collecting mosses, lichens, and specimens of *Leiophyllum*, until finally I found myself on a narrow ledge of loose rocks with precipices several hundred feet deep on both sides. It was a fearful place. With a palpitating heart I crept back, and hastened down the mountain.

27th. The day was cool and pleasant. Drs. Hill and Hammer returned home, and Rugel and I determined if possible, to reach the top of some of the highest peaks.* After much toil over many dangerous places where a mis-step would have thrown us down precipices on the rocks beneath, we reached a long narrow ridge above the rock which overhangs the sulphate of magnesia locality. Here we met with a few straggling small trees, *Betula lenta*, (sweet birch,) *Pinus fraseri*, (balsam fir,) which answers well to the description of Pursh, and is certainly very distinct from the *Pinus balsamæ* of New-England. Such deep gulfs were between the ridges that it was almost impossible to proceed from one to another; besides it was too early in the season to obtain specimens in flower in that elevated region. Growing in the rich vegetable mold of the cove, was the *Erythronium Americanum*, (Dog's tooth violet,) *Dielytra cucalaria*, and *Dentaria heterophylla*. We retraced our steps to where we left our horses, and next day returned to Sevierville, loaded with specimens, and well pleased with the result of our excursion. Yours truly, S. B. BUCKLEY.

West Dresden, Yates Co., N. Y.

TRANSMUTATION.

MR. EDITOR—I have been somewhat amused, if not edified, by the arguments advanced in your paper from time to time by the advocates of the doctrine of the transmutation of wheat into chess. As a case in point, and something new to me, I will state a fact from my own observation. In the spring of 1839, I laid off a new garden, and as I had no manure of my own as rotten as I wished, I purchased six wagon loads from a neighbor, out of a manure bank, upon which, the season before, I observed a quantity of Jimson, or Jamestown weed growing. I detest this weed above almost any other, and had never seen it growing on my farm; but thinking that it would only trouble me for one year, I concluded to venture it. Well, the manure was scattered over the garden, pretty well worked in, and a good deal of Jimson was pulled up that year. Since that, the garden has been in constant cultivation; no Jimson weed to my certain knowledge has ever been suffered to go to seed, and but one or two to get in blossom. I have never found but about two stalks on any other part of the farm, and yet, every season since the manure was first put on the garden, it has come up more or less, and this season, which makes the seventh, it came up in greater quantity than it ever has since the first year. Now, if I had scattered this manure on my field, and then put in a crop among which Jimson would not grow, and so kept it until last fall, then sowed it in wheat, and the wheat had been destroyed by frost or otherwise, and I had found Jimson coming up thick in its place, where it had been never known to grow, would not I have been as much justified in concluding my wheat had turned to Jimson, as the advocates of transmutation are in concluding theirs has turned to chess?

My wheat used to "turn to chess" a good deal, though I sowed some little in my seed; yet, I always thought it came up five for one in proportion to the wheat. About six years ago I picked a half bushel of wheat, head by head, in order to get it pure from mixture of every kind. I sowed it on a clean piece of ground, and the next season had not a grain of chess or cockle in it. I have sowed clean seed now for four years. I have not seen cockle on the farm since, and although my wheat has been winter-killed more or less every year, it has not "turned to chess" at the rate of more than from one to four stalks to the acre, and I think I might possibly have sown that much with my wheat without observing it. I have now a pile of wheat for seed on my barn floor, in which I think there cannot be one grain of chess found to the bushel, cleaned through a mill without a screen.

Piqua, Miami Co., O. S. WIDNEY.

P. S. As you might wish to know, I will state that spring crops here look very fine, with the exception of hay, which is but middling. Wheat above an average yield, and remarkably heavy to the bushel, generally weighing 63 lbs. and upwards.

THE CULTIVATOR—A FARMER'S LIBRARY.

MR. TUCKER—I had been a rather irregular reader of the Cultivator for several years, failing to subscribe some years, and not receiving all the numbers other years, until last October, when I resolved to have the whole. I procured all the back volumes, neatly stitched, from your office, had them well bound, and have been occupying my leisure time this winter in reading the work in course. I began with Judge Buel's little experiment sheet, printed in March, 1834, and have examined somewhat carefully every paper down to your excellent number for January, 1845, which I finished last evening. The result is a most thorough conviction that the Cultivator eminently deserves to be labelled the FARMERS' LIBRARY, and purchased by every tiller of the soil, for the very first of his agricultural reading. I say this after having read many agricultural books, and several of the current agricultural papers, most of which are certainly valuable, and merit a high place in the farmer's reading. It is in the hope of inducing others to procure the entire work, and read it attentively, that I trouble you with this note.

The Cultivator, though not the pioneer, is certainly the *standard* agricultural paper of the land. And this will be cheerfully admitted by most readers, and by every conductor, (except perhaps one, almost the last one that should not admit it,) of agricultural papers. None can tell its value without a careful and somewhat continuous reading. It is as a book, or series of books, its real worth will be known. I had heard it said, (e. g.,) that the first vols. were worth little to any persons except the tillers of very sandy soils, such as constituted Judge Buel's farm—that later vols. were taken up with the chess controversy—with the controversy between the advocates of native and imported breeds of cattle, &c., &c. Nothing is more untrue. The vols. conducted by Judge Buel, are full of pure wheat; no chaff—no foul seed. His care for young farmers is excellent, and this department of his paper is alone worth more than the price of the whole, especially to every young man, who (like myself) has commenced farming since Judge B.'s death. The vols. since then are much like the last, which I take it the reader has seen, except that I thought each succeeding one better than its predecessor, and the present bids fair, (even saying nothing about the excellent cuts,) to be the best of all. I have been astonished to find in the whole work so little valueless matter—so little repetition—so little controversy. The correspondents have given a vast amount of scientific and practical information, while the labors (both scientific and practical, if they can be separated,) of the editors, especially Messrs. Buel, Gaylord, and Tucker, can hardly be appreciated above their worth. I am sure, I would not part with the *information* and the *satisfaction* I have obtained from the Cultivator for ten times its cost. And I sincerely hope every farmer who has not yet taken the paper will do so soon, and every one who has not the back vols. will send $10 to Mr. Tucker at once and procure the whole. And if he does not find, *on a careful perusal*, that *each* volume is worth more, (counting worth, both pecuniarily and intellectually, or in the better tillage of his land, and the better culture of his mind,) I will agree to refund the sum, and take the library at once.

Ohio, Feb., 1, 1845. H.

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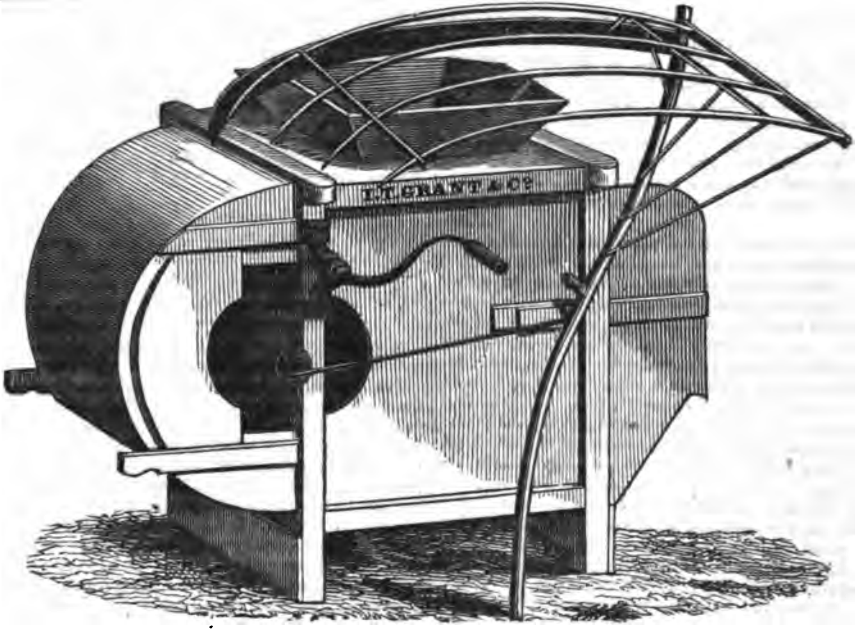
* According to M. Nichollett, the Smoky mountain, near the Warm Springs, is 5000 feet above the level of the sea, and judging from appearances, the range that we visited, between Sevier county, Tenn., and Haywood county, N. C., attains an elevation not far from 6000 feet.

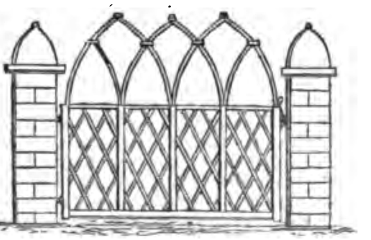


PREMIUM FANNING-MILL—(Fig. 82.)

Mr. TUCKER—I wish to occupy a brief space in the Cultivator to invite the attention of agriculturists to Mr I. T. Grant's "Patent Fan-Mill," which in my opinion, excels any other mill now in use, in mechanism, durability, and utility. The "Patent Fan-Mill," is similar to the Fan-Mills heretofore manufactured by Mr. Grant, which mills have taken the 1st premium at two State and five County Fairs, except his late improvement, which consists in adding to the screen and other parts in general use in Fan-Mills, an additional screen, and what is denominated a chess board, which are arranged in such manner as to cause a much stronger blast of wind to act upon the grain at the lower part of the shaking sieves or screens than at the upper, and thereby to aid the action of said sieves in effecting the screening, by which means the chaffing and screening are performed simultaneously. All other Fan-Mills require that wheat should be run through twice, to clean it thoroughly, while the Patent Fan Mill will chaff and screen wheat more effectually in one operation than other mills will in two operations, thereby saving half the time and labor required by old mills. The "Patent Fan Mill" will also clean all kinds of grain, such as rye, buckwheat, oats, corn, peas, beans, clover, timothy, and flax-seed, in one single operation. Oats and peas are separated by being run through the mill once.

Notwithstanding the labor and expense in bringing the Fan Mill to its present state of perfection, Mr. Grant is enabled to furnish the "Patent Fan Mill" at the same price that he has received for mills heretofore manufactured by him. Directions how to rig the mill for cleaning different kinds of grain, accompanying each mill.

Lansingburgh, August, 1845. W. BROOKENS.



ORNAMENTAL GATE—Fig. 83.

LUTHER TUCKER, ESQ.—I herewith send you a rude draft of a gate, which I should like to see in your Cultivator. It would add much to embellish the premises near a dwelling, but would be rather expensive to place here and there on a farm. The posts on which the gate hangs should be constructed of stones, as they are much more durable, and the gate is less liable to sag than when hung on wooden posts. The gate may be made of oak or ash, or almost any wood that will bend without breaking. The two end posts should be about 5 feet high and larger in diameter than the rest. The others should be about three inches in diameter and 8 feet high. The long poles are split about 5 feet from the base, and are tied with strong wire, to prevent them from splitting farther; then spread them 18 inches or more apart, as fancy directs. The lattice work may be made of smooth slips of boards 1½ inches wide to be nailed to the poles on the inside. A SUBSCRIBER.

Albany, July, 1845.

IMPROVEMENT OF HORSES.

There never was, in this county, so many fine foals in any one season, as there are now; and the cause, I think, may be attributed to the fact of a tax having been imposed on stallions—hence all the *scrubs* had to leave the turf, and farmers have had the advantage of breeding from the best sires. If this advantage is only pursued, and dams of good temper and qualities are alone allowed to breed, the improvement may become still more important.

FISTULA AND POLL EVIL.—The simplest, as well as readiest cure for these two diseases, that ever came to my knowledge, is common table salt. My neighbor, Mr. Ramsburg, took a horse a few years ago, that had a fistula, and after every other effort had been made to cure him, without the least effect, he threw into the ulcer a handful of salt, and the good effect was soon perceptible. The salt was repeated every day or two, and in a short time a cure was perfected.

Last summer, I had a mare that had the poll evil, and I cured her also with salt applied in the same way. I put however, a small bit of red precipitate in the wound, twice. Both animals are at this time well and serviceable. GEORGE BLESSING.

Frederick county, Md., July, 1845.

FOOT-ROT (SO CALLED) IN SHEEP.

Luther Tucker, Esq.—A late number of the Boston Cultivator contains an article on this subject from Mr. Jewett of Weybridge, Vermont, which induces me to send you this communication. The importance to the sheep-raising community of this whole continent to understand the nature and causes of the many diseases to which sheep are liable, is incalculable, and when well understood, they will be surprised to find the ease with which they can be cured, and in most instances prevented. When Mr. Jewett is informed that I was born and raised a shepherd, and that the little information I possess is the result of long and attentive practice, he will, I am sure, readily give me credit for the true intention with which I write, namely, to set him and others right, as to the true cause of, and remedy for, this (so called) disease, and not to find fault with him, or enter into any controversy about it; for I willingly admit that he gives evidence of some practice and observation, and that I believe it is only necessary to *direct* that observation to make him a valuable shepherd.

Properly speaking, there is no such *disease of itself*, as foot-rot. It is invariably the result of the neglect of another disease, simple and easy to cure, or the result of accident by a bruise of the foot in some way; and always evinced by a slight but visible lameness in whichever foot is injured. It is *not contagious, neither can it be communicated by inoculation.* I saw the latter tested myself by the late Mr. Field, father of the present able veterinary surgeon, of London, on a visit to an extensive flock-master in Leicestershire; and I think by the time you read this through, you will be convinced yourself as thoroughly as though you saw the experiment tried, of the impossibility of its being so communicated, inasmuch as foot-rot is not a disease of itself.

Sheep have a secretory outlet between the claws, peculiar to them, which is liable to become obstructed, and when obstructed for a few days the tender skin between the claws becomes red and inflamed, the sheep becomes lame on that foot, and more lame immediately after its first rising in the morning than at any other time of day, the inflammation making greater head-way while at rest during the night than at any other period. The watchful and observant shepherd will see the lame sheep at once on putting his flock up in the morning, and will apply the remedy, which is simple. First clean the claw by running your finger or thumb up and down through it, wet with your spittle, if you have no water convenient, then take out your bottle of spirits of turpentine and wash it well with your finger with that; let the sheep lie a few minutes until the claw is thoroughly dry, (I shall afterwards describe the simple mode of securing a sheep so as that it cannot get off its side until loosened by the shepherd,) and then rub between the claw a mixture of two parts tar and one part sheep's suet boiled together, well blended and let cool, which the shepherd should always have prepared and in a tin box to take out with him. This done let the sheep go to pasture again, and repeat the same dressing every second day until the sheep becomes well of the lameness, or until the skin breaks, which it sometimes will do in spite of the dressing, and assumes the nature and appearance of the disease called a scald, when you must then apply the liquid dressing described below. The scald is a disease of itself, though sometimes produced by the stoppage of the secretory outlet of the claws in the manner described above, is generally produced by very heavy dews, or a long continued series of humid weather, which predisposes the foot to this injury. It is as the other disease, first discovered by the shepherd from lameness, but at a different hour of the day. When the flock are first put up in the morning, the dew is heavy, is cooling to the foot, and washes between the claws clean, and though the scald has made its appearance, yet at that hour, the moisture prevents the friction of the parts from hurting and causing lameness, and it is not discovored until towards noon, when the dew is all gone, and between the claws becomes dry, and the friction commences to hurt and irritate the parts, and then the lameness becomes apparent. When this is the case the shepherd knows it is the scald,—he collects his flock, catches the lame sheep, ropes them as it is termed, and lays them on their side. He then takes his wash, previously prepared, composed of two parts tar, and one of oil of turpentine well mixed together, and then slowly added and stirred in, one part of muriatic acid (spirit of salt) with after that four parts of blue vitriol, very finely powdered, to which add spirits of turpentine sufficient to make the whole, when well shaken up in a bottle, of a liquid consistency, so that the wash may be applied by dipping a feather into it, with which annoint the scalded parts with the feather. The bottle must be well shaken every time the feather is dipped in, and when the claws are dressed the sheep must then lay tied until the wash is perfectly dried in, and a sort of incrustation is formed on the scalded parts,—every second day is enough to dress. It sometimes occurs that notwithstanding every care this scald turns to a *sore*, and then it is, that it is called the foot-rot. The sore is produced generally by something getting in between the claws, such as a bit of gravel or hard clay, or struck by some substance that would produce extra irritation, proud flesh and sloughing. The treatment then is, if the sore extends either way to the horny substance, to pare it away to the healthy edge, then shake a little fine powdered loaf sugar on the part, which will entirely take away the proud flesh, and then after half an hour apply the wash, and when dry, loose the sheep to pasture. Care should be taken never to wrap the foot with a cloth, unless when the horny substance is taken away, and the part is left entirely bared to the ground, and then the one claw only should be bandaged; or if both are bared, *each claw should be separately bandaged*, to prevent greater friction of the parts, and to keep them the more cool. *Under this circumstance alone*, is a bandage on the foot of a sheep *ever admissible*, because it causes greater heat, and of course greater friction by keeping the claws bound together and not allowing them to spread. In this stage of the disease, it is necessary to dress every day, and it must be noticed, that the cool of the morning is the best hour for dressing, because the sheep in hot weather is much oppressed by being tied down on its side for the length of time, sometimes an hour or more, that the proper application of the dressing requires. It not unfrequently happens that sheep show lameness when you can neither see a scald, nor discover inflammation between the claws from the stopage of the secretory outlet; and then the shepherd must look for the cause, by pressing and examining the hoof round, in the same way as the cause of lameness is sought for in the horse's hoof, and when discovered, the horny substance must be pared down to the part affected, and then the applications made as before described. In this case the lameness is produced from precisely the same causes, as the lameness in a horse's foot, by a bruise or hurt, or by the prick of a nail, or the gradual working-in of some sharp gravelly substance, which when discovered, and on opening matter is found, it is immediately pronounced as foot-rot in the sheep, but who ever heard of foot-rot under similar circumstances in the horse, or who ever supposed that the matter, if applied to another horse by inoculation, would produce lameness and a similar sore, in the same region, the foot? On this I deem any other remark unnecessary. No other help than the shepherd and his dog is required; nor no other instrument than a strong, sharp and well pointed two bladed knife, the large blade to pare down the hoof, the smaller one to cut out down to the part affected.

The way of tieing down the sheep is as follows: get a soft rope made of tow with three plys, each ply as thick as your middle finger, five feet long; then splice both ends together and you have a double rope 2 feet 6 inches long, when you catch your sheep turn him gently on his side, then raise him to a sitting posture, having his head bent over under your stomach, take your rope and put it over the *left* hind leg just above the hock, catching the sinew, then give your rope two or three twists, so as to confine the leg, and pass it along the belly and on the side of the chest close under the elbow of the *right* fore leg or shoulder, and pass the other end over his head on to his neck, lay him down on his side, and there he must remain secure until you choose to loose him. When you go to dress him or pare his hoofs, the easiest position for the sheep, and the handiest for the shepherd, is to place him in a sitting posture, the rope still left on until he is ready to be let out to pasture. The paring of the hoof can alone be well performed with a strong, sharp bladed knife, and is very simple; leave the bottom of the hoof as even as possible, so that the sheep may have an even and flat surface to stand upon, taking care of not cutting down to the quick; the toes should be left smooth and rounded, and no portion of the heel touched, unless some jaggy part is hanging.

The shepherd with his dog and crook, and 24 tow ropes on his shoulder, his knife and vials in his pocket, can go out and pen his sheep in any clean and convenient corner, catch the lame ones and rope them, let the rest of his flock out to pasture, and then in a very few hours dress his invalid sheep, and be prepared for his other work. Suppose the shepherd to have the charge of a flock of 1000 sheep, he must be very ignorant, or very careless, ever to require to use more than 12 or 18 out of his 24 ropes on any one day; there is no business at which a man is engaged, that "a stitch in time is more certain to save nine," than in herding a flock of sheep.

With much respect, I remain, dear sir,
Your humble serv't, Grazier.

Louisville, Ky., July, 1845.

A LETTER TO FARMERS.

Mr. Editor—There is no portion of the "Empire State," or any other section that has come under my observation, where the agricultural population enjoy sufficient mutual thrift to prevent the frequent and painful contrast of a comfortable, or an elegant mansion, with poverty-stricken tenements, lacking not only the comforts, but the decencies of life. And these, in some instances, have been for twenty or thirty years, the abode of honest, hard-working men, whose health and strength have been sufficient to have earned all the necessaries of life, educated their children, and reserved a generous portion for old age. And perhaps they have earned it, and because of their inability to keep it their neighbors instead of themselves have been enriched by their toil.

Whatever has been the cause of their destitution, whether it was a lack of calculation, temperance, or industry,—whether they have little or nothing, they must have a place which they *call* home, which you can help to make more comfortable. Do not see them wear away year after year in the same cheerless unvarying round. And do not hesitate to advise them when you know they are squandering the little they have earned, in foolish and unnecessary trading. And try to find them some employment, when they cannot get work elsewhere, and you will in a measure prevent them from contracting habits of idleness and dissipation, and save their families much suffering.

Little offices of kindness, such as giving them a fruit tree or a few choice seeds, offering your team to break them up a garden, (in turn for their labor,) lending them your agricultural paper, &c., &c., will make them feel that you do not consider them or their affairs beneath your notice, and may be the means of exciting their gratitude and ambition to profit by your advice and example.

I never take a ride of half a dozen miles in any direction, without feeling my comfort greatly abridged by the filthy and forlorn appearance, or the uncomfortable condition of most of the tenements inhabited by the poorer class of country laborers. Not unfrequently fastened upon the road-side, on the summit of a treeless hill, to be scorched by the blaze of a summer sun, and fanned by the wintry blast; or placed on stilts in a smoky swamp, a prey to musquitos and the ague, without well or cistern, wood-shed or garden, except perhaps a patch of potatoes which the children are kept from school to watch.

Every man who lives in the country and is able to work, whether he has a trade, or depends upon tilling his neighbors' ground for his support, can or ought to earn a comfortable home. And if he can have but an acre of ground with a snug warm cottage, (though it be of logs) he has sufficient space for all the conveniences he needs, and may be as comfortable and happy as if he were the owner of thousands. And if he can be induced to add a few cheap embellishments, which will cost him nothing but his labor, such as whitewashing his buildings and fences, keeping a neat yard and garden, raising a few choice trees, vines, and flowers, his humble and limited possessions will form no unpleasant contrast with your spacious or splendid domains.

If our independent farmers would take a little more interest in the affairs of their poor neighbors, they might in a short time greatly ameliorate their condition, and improve the face of the country.

A Farmer's Wife.

Onondaga, N. Y., Aug. 1845.

CURE FOR THE BARBER'S ITCH.

Mr. Tucker—Perhaps the following recipe may be as useful to some of your readers as it has been to me, and I therefore communicate it for publication:

Take a tea-spoon even full of salt-petre with an equal quantity of salts, dissolve them in a tumbler of water and drink the same in the morning before breakfast, and continue to do so three mornings in succession before breakfast, then omit three mornings, and so repeat and omit three mornings, till nine doses are taken in the space of fifteen days.

The above named humor or disease I obtained at some barber's shop where I was shaved on my way from this place to New-York city, in April, 1843. I tried a great many prescriptions to no effect, and when I set out on my return, via the lakes in September following, my face, chin, and neck were grievously afflicted with running sores and hard tumors, attended with considerable fever. I was obliged to resort to poultices to allay the inflammation during the whole passage from Buffalo. A passenger on board the steamboat in which I came up the lakes, recommended the above, he having *had* a troublesome humor of the blood cured by it some years before. I had faith in the salt-petre as a purifier of the blood, and when I arrived at my own house I followed the prescription. The progress of the disease was checked at once—the itching subsided, the hard tumors gradually disappeared, and sores dried up in a few days after the last dose of salt-petre was taken. Some one remarked to me that the disease was hard to cure, and that it would be likely to break out again. In about six months it again made its appearance. I applied the same prescription. The disease soon disappeared, and has not shown itself since, although this was more than a year ago.

The salt-petre and salts are far from being a palatable dose, but they may be made more so, by wetting the mouth with and swallowing a small quantity of sharp vinegar, both before and after taking them.

It becomes all who get shaved in barbers' shops, or with other men's shaving utensils, to look to it that they do not get inoculated, nor inoculate themselves, with this or any other troublesome humor of the blood, and which in this instance stated was worse than an ordinary case of the small pox. G. G. S.

Brunswick, Peoria Co., Illinois, July 24, 1845.

Filberts.—They do not require a very rich soil, but grow well in that which is rocky or gravelly. The ground is kept clean around the trees, which are placed about twelve feet apart. They are very carefully pruned, and one stem only is left to branch out a few inches above the ground; the branches are trained and pruned in the shape of a punch bowl, and are not allowed to run above four or five feet high; thus they will bear abundantly, and be very profitable. When the filberts are gathered, they are laid to dry in the sun, or under a shed exposed to the air. If they are well dried, they will keep good for several years. *Penny Cyclopedia.*

The above refers to England; but would not this tree succeed in the United States and prove profitable to the cultivators of it. It seems to me that some trials on the culture of it in this country, ought to be made, as also on the English walnut, so termed, which has proved profitable in some instances at least. W. Jennison.

THE STRAWBERRY.

To the Editor of the Cultivator—I met with your Cultivator yesterday, and noticed with pleasure the just observations you have made on several occasions, on the character of the strawberry plant. Your plate of the blossoms,* should be republished yearly, at the period of blossoming. Cultivators will daily see the swelling of the perfect fruit of the one, and the total, or partial sterility of the other. The plate has one error. The blossoms are represented as of the same size. The staminate blossom, is always the larger blossom, and often double the size of the other.

I saw in a late horticultural paper, a flattering description of Codman's Seedling, speaking of it as a great bearer, fine flavor, and superior in size to all others, and lauding its great *variety of shape*. The measurement given averages about four inches in circumference, which is below the standard of many other varieties. The plant I have not seen, but the various *shapes* of the fruit, which the writer so much admires, convinces me it never will be valuable for a general crop. The fruit is of *various forms*, in consequence of its being a *staminate* plant, and *partially* defective in the *female* organs. It is barely possible that it is a pistillate plant, and the defect in form occasioned by the want of staminate plants near. It may prove a very valuable variety to cultivate with pistillate plants, as it will cause every one of those blossoms to produce a perfect fruit, and produce a partial crop of its own.

The Ross Phœnix is described in your work, as having leaves 5¾ inches in diameter. Is there not a slip of the pen in this? I last spring, for the first and only time, saw this variety in blossom, in a small box. The leaf was not of unusual size. It was a blossom perfect in stamens, and the pistils more perfect than I have ever seen them, in any but a pistillate plant, except in one instance, and it will doubtless be valuable for impregnation; but if it is capable of perfecting all its fruit, it will be a prodigy, should the fruit be of large size. I do not believe in this, for the blossoms are not all perfect in both organs, or the fruit would not have a variety of shapes, which I am informed is the fact. It is time the question was settled.

In Cincinnati, where the male and female character of the plant is fully believed in by all market gardeners, a single individual has brought from his grounds 120 bushels to market in a single day; and towards the close of the market the finest fruit is sold as low as three cents per quart. The strawberry most cultivated for market, is the Old Hudson. I deem it one of the best flavored, and the most profitable for a general crop. It is of large size, and bears carriage. By itself, an acre would not produce even a defective berry, and the character of the plant not being generally understood, many have ceased to cultivate it. It is not known in Boston. Mr. Downing has not described it in his work, but in the place of it the English Hudson, which is an inferior fruit. I know that 50 years since it was cultivated in this State more than all others, and is still the favorite market fruit in Philadelphia.

In 1842, Mr. Hovey, as I discover by your paper, admitted my account of his seedling was true. That it was defective in its male organs, and required to be planted with staminate ones—in 1844, that he came out with a different doctrine,—that his original plant was perfect in both organs, but a few of the runners had become defective in the male or female organs, by high cultivation. A strange doctrine this. There is at times, by high cultivation, a disposition in flowers to become double. When cultivation changes the sexes of the strawberry (which it never has to my belief,) it will be by forcing out the defective male organs in the pistillate plant, and to increase, not destroy them in the staminate one. In favorable seasons, or by forcing, Kean's Seedling, and other staminate plants that are partially perfect in both organs, will have the pistils better developed than usual, and have the crop of fruit increased.

But my views are in opposition to the theory of your very intelligent and observing horticulturist, Mr. Downing, and his opinion is entitled to the greater weight, as he is supported in his views, not only by Mr. Hovey, but by all the intelligent and thorough-bred Scotch and English gardeners I have ever met with, who all contend that Kean's Seedling, was a great and uniform bearer in England and Scotland, and that all their other varieties were there perfect, in both organs, and uniformly productive. High and numerous as these authorities are, I do not believe one word of it. In stiff soils, Kean's Seedling will bear better than in a light dry one. There is no soil or climate in which it will perfect all its blossoms. If Mr. Downing's theory be true, that all natural plants are perfect in both organs, but that a few become defective in the one organ or the other, by high cultivation, how comes it, that in your field of natural plants, you have barren and bearing patches?—patches barren from being all staminate or pistillate—patches prolific from the presence of both. If his doctrine be true, why is the pistillate blossom always much smaller than the staminate? Why is it, that in raising from seed (and surely seedlings are natural plants,) that in general, there are as many staminate as pistillate plants, and not one (as all our western gardeners will tell you, who raise seedlings by the thousand,) perfect in both organs, and capable, by itself, of bearing a full crop of fruit? And further, if Mr. Downing's theory be true, how is it that our market gardeners not only tell the male from the female when in bloom, but at all seasons, from the stem and leaf, and even learn their children of 10 years of age to do it? If Mr. Hovey will send one of his perfect seedlings to Mr. Wilder, President of the Massachusetts Horticultural Society, and he, after a trial, shall pronounce it capable of bearing a full crop, I will give $50 for the plant. It cannot be made to produce even a single perfect fruit. For 20 years I kept the Hudson in a bed by itself, to make new beds from. It increased yearly by runners. During the whole period not a plant changed its character, or produced even a defective berry, unless as a matter of curiosity I placed a staminate plant near. I never saw a white, or a monthly variety, that was not perfect in both organs. The question will soon be settled, by further experiments of Mr. Downing himself. He concedes the old doctrine, against which I have been warring, (that all varieties were perfect in both organs, and no necessity of selecting plants to insure a crop) is not true. He states my practice to be indispensable, unless persons are careful to *select* what he calls "natural plants." "But if these are selected," says he, "every blossom will perfect its fruit." I deem one male (staminate) plant, necessary to ten or twelve female (pistillate.) If his theory be true, an acre on his plan will be far less troublesome than mine, and produce one-tenth more fruit. Its truth will be at once tested, for he will in future, of course, supply customers with all "*natural* plants." Heretofore he could not have been aware of it, as he sent me four or five kinds, (the Bishop was one) and they were all staminate, and bore but little fruit. If he will send to Mr. Jackson of Cincinnati, one dozen of each of the following *natural* plants, Mr. Jackson will plant them separate, and when growing will select the best plant of each, and let them form runners. If he shall report all the blossoms perfect in both organs, and bearing the usual sized fruit, I will pay him $5 for each variety:—True Kean's Seedling; Hovey's Seedling; Old Hudson; Bishop; Methven Scarlet; Brewer's Emperor; Warren's Seedling; Myatt's Pine; Swainstone Seedling; Myatt's Eliza. Most of these I have taken from Mr. Downing's work, never having seen them. Mr. Downing has. Yours, respectfully, N. Longworth.

P. S. In the grape and strawberry only, would I venture decidedly to differ with Mr. Downing. To these plants I have devoted more attention than he has.

Newark, N. J., July 31st, 1845.

Peach trees are more liable to escape frosts, when planted on the north or west sides of buildings, the shade from the south sun preventing the too early starting of the young fruit buds, and their consequent injury by subsequent frosts; and the latter shading them from the morning sun on frosty mornings.

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* Cultivator, vol. 9, p. 165.

THE CULTIVATOR.

ALBANY, SEPTEMBER, 1846.

TO CORRESPONDENTS.

Communications have been received, since our last, from F. I. F., J. P. Norton, D. G. Mitchell, Grazier, G. G. S., Solon Robinson, G. M. Eichelberger, Eaton, Buel Warner, J. Bowman, C., Jno. H. Dent, W. Brookens, N. Longworth, John Crary, A. Dey, J. W. Seeley, S. W., A. L. Bingham, Senex, S. Widney, W. R., B. H., Jno. Girdwood, J. D. F., An Old Farmer, T. C. Peters, A Subscriber, E. N. Horsford, Wm. N. Ford.

☞ Answers to several inquiries, as well as several communications intended for this No., are necessarily deferred till next month.

MONTHLY NOTICES.

Our Foreign Correspondence.—We have the pleasure of presenting our readers this month, with the first of a series of "Notes of Travel in Ireland," from the pen of a gentleman abundantly qualified, from his practical knowledge of the agriculture and rural economy of both countries, to give peculiar interest to his "notes," from which we think our readers may safely anticipate much gratification. The letter from Mr. Girdwood, of Scotland, in continuation of his series of essays for the Cultivator, was received too late for this month. We think ourselves most fortunate in being favored with the contributions of Mr. Girdwood, and "F. I. F.," as well as those of Messrs. Norton, Horsford and Mitchell, whose Letters have given an interest to our pages which they could not otherwise have obtained.

Colman's Tour, Part IV.—Our readers will be glad to learn that the IVth Part of this work is now in press at Boston. It will be issued about the 10th of next month.

Aguirre Wheat.—By reference to the doings of the New-York State Ag. Society, it will be seen that Mr. Townsend of this city, has presented to the society a parcel of wheat of the above name. The specimen was superior in whiteness and weight to any we have before seen. It has been distributed among the members of the society, with a request that it be carefully tried and reports furnished of its product, &c.

New variety of Sweet Corn.—In our January No. we published a letter from Judge Darling, of Ct., describing a kind of sweet corn which he had produced by an intermixture of the common sweet corn with a very early variety of the Canadian yellow. Judge D. sent us a few ears of the new variety, which we distributed among the farmers and gardeners of this vicinity. Yesterday, Aug. 21, a man brought us an ear which had been raised from this, which is ripe enough to gather for *seed*. We cannot tell the date of planting, but it was not early in the season. The same man planted several other kinds of sweet corn at the same time, but Judge D.'s new kind was *several weeks* earlier than any of them.

Maple Sugar.—We have received from Mr. L. O. Stevens a very handsome and excellent sample of maple sugar manufactured by Mr. Joseph M. Stevens, of Hardwick, Caledonia county, Vermont. Mr. Stevens, we are informed, made the past season 4500 lbs., of superior quality. We agree with Mr. S., that "we see no reason why this sugar may not in every way equal the foreign article in flavor, whiteness, and most certainly in *purity*." He states that the process of manufacturing sugar of this quality is simple and easily explained by the manufacturer.

Shepherd's Dogs.—S. M. Bell, West Alexander, Washington county, Penn., informs us that he can furnish a few of these dogs—"price $10 per pair for puppies—grown dogs, price in proportion." A few of these valuable animals, of pure blood, can also be had on application at the office of the Farmer's Cabinet, Philadelphia—price $5 each.

Potatoes for fattening Animals.—We have repeatedly expressed a favorable opinion of potatoes for fattening stock,—an opinion, which though opposed to the theories of some, we believe to be based on fact. The following extract from a letter of a gentleman of extensive practice as a farmer, corresponds generally with our own experience.—"Those persons who are of opinion that potatoes cannot fatten either hogs or cattle, are very much mistaken indeed. I know of no food I would prefer to fatten hogs upon than *cooked* potatoes, mixed either with a little meal or bruised oats, mashed and made into balls as large as a man's head, and laid on a shelf for twenty-four hours, to become a *little* sour. It will produce firm and transparent meat, and lard of a very superior quality, and at a cheaper rate than corn at 12½ cents per bushel, fed in the ears."

Agriculture among the Cherokees.—We are happy to observe the various indications of improvement in the domestic arts among these people. We learn that they have lately organized an Agricultural Society, and are to hold an exhibition of stock, &c. For several years past, we have had from forty to fifty subscribers to the Cultivator among them. They publish a very good paper, the *Cherokee Advocate;* but which, we are sorry to say, we do not receive regularly. Will the publisher have the goodness to see that it is punctually sent us?

Delaware Agricultural Society.—This spirited and popular society holds its exhibition at Wilmington on the same days of our State Show at Utica. We regret this collision, as it will prevent many from visiting both shows, who would doubtless have done so, had they been held on separate days. We presume, however, that our Delaware friends will have no lack of spectators to witness their display of the products of the soil and the work of the hands. Jonathan Roberts, Esq., of Pennsylvania, and Dr. Muse, of Maryland, are to deliver addresses.

Peat and Marl.—Mr. Henry Reynolds, of Greenfield Centre, Saratoga co., has left us some specimens of peat and marl, taken from his farm. The peat appears to be a good article, and may be made valuable in composting with animal manures, or mixing with soils deficient in carbonaceous or vegetable matter. The marl is similar to what is found in places in this State underlying beds of peat. It is what is called fresh-water shell-marl. When applied to soils, its good effects are not always immediate, but in the course of a few months it moulders down like ashes, and improves the texture of the soil, as well as promotes vegetation.

Hovey's Straw Cutters.—We would call attention to the advertisement of this machine to be found in this number. It will be noticed that Mr. H. has considerably reduced the price of his cutters. Perhaps there never was a season, which, from the shortness of the hay and other forage crops, seemed to call for the practice of the utmost economy in feeding, so much as the present. Experience has shown that there may be a great saving by cutting and mixing various kinds of fodder, and that with a little attention and labor, and with a small quantity of meal, shorts, bran, fox roots, straw, and such qualities of hay as are not usually considered valuable, may be made to afford stock a healthy support through the winter.

Durham Cattle.—The advertisement of Geo. Vail, Esq., in this No. is worthy the particular attention of those wishing to obtain stock of this description. Several of the animals, it will be seen, were got by Mr. V.'s imported bull *Wellington*, and others by *Meteor*, which is acknowledged by all who have seen him, to be a bull of uncommon excellence.

Correction.—A slight error occurred in our notice of Mr. Albott's horse Consternation, in the July No. He won the £100 at *three* years old, instead of at four, as we stated, and has made one or more races since the accident to his leg.

☞ The attention of Hop Growers, is invited to the advertisement of Mr. Ryckman in this paper.

EXHIBITION AND FAIR
OF THE
NEW YORK STATE AGRICULTURAL SOCIETY.

From all we see and hear, we confidently expect that the Exhibition of the State Agricultural Society, which is to take place at Utica on the 16th, 17th, and 18th of this month, will be at least equal in interest to any one which has previously been held in the country. We presume the collection of people will be very large, and have reason to think there will be no lack of agricultural and horticultural productions, or of the evidences of mechanical skill. The show of stock of all kinds will unquestionably be large, and may be expected to sustain the reputation of our farmers in this respect. Utica, it will be recollected, is the centre of the great dairy district of the state, and hence we may expect a richer display of butter and cheese than has been made before; and in connexion with this department, we shall also look for a better show of *milch cows*, the most important stock for that region, as well as for a large part of the country.

Excellent arrangements have been made at Utica in relation to the various departments of the exhibition, and we are fully satisfied that the citizens of that flourishing city are determined to do all in their power to promote the interests of the Society on this great occasion.

Mr. Quincy, of Massachusetts, who has consented to deliver the address, is a gentleman well known as being warmly devoted to the advancement of agriculture and all the industrial arts, and is not unused to speaking on such subjects. Having had the pleasure of listening to him on a like occasion, we venture the assurance that no reasonable anticipations will be disappointed.

We call particular attention to the list of awarding committees, and the regulations in reference to the exhibition as given below.

REGULATIONS FOR THE FAIR.

All members of the Society, and all who may become members at the time of the Fair, by the payment of $1,00, will be furnished with **Badges** which will admit the person and his wife and children under 21 years of age, to the exhibition at all times during the Fair. Tickets to admit a single person, 12½ cents.

Members will be allowed to enter in carriages with their families, but no hacks or other public conveyances will be permitted to enter except when the inmates are members of the Society, without paying a dollar for each entrance, and the inmates, if not members, to furnish themselves with tickets.

Gentlemen may become members and obtain badges at the stage office of J. Butterfield & Co., and at the bookstores of I. Tiffany, G. Tracey, and Bennett, Backus & Hawley, Genesee-street, Utica, or at the Business Office, at the show-yard.

All exhibitors at the Fair, must become members of the Society, and have their articles entered at the Business Office before taking them into the enclosure.

The trial of Plows will take place on Tuesday, the 16th—consequently all competitors must have their plows on the ground on the morning of that day.

All those who intend to compete for the premiums on agricultural implements, butter and cheese, sugar, cocoons, silk, &c., should have their specimens on the ground on the 16th, that they may be deposited in their appropriate places, and the rooms suitably arranged on the day previous to the Fair.

No premiums will be paid on animals or articles taken away before the close of the Fair.

Every thing intended for the exhibition, must be on the ground at or before nine o'clock, on the morning of Wednesday, the 17th.

Animals and other articles offered for exhibition, must be labelled with the owner's name and residence at full length.

The Committees to Award Premiums.

The several Committees to award Premiums, are requested to report themselves at the Society's room, at Bagg's Hotel, on Tuesday evening, the 16th, or at the Business office, on the show grounds previous to ten o'clock on Wednesday morning, the 17th, after which all vacancies will be filled, and the committees will enter upon their duties at twelve o'clock.

The Judges are requested to furnish their awards to the Recording Secretary by twelve o'clock on Thursday, that a list may be made out from which the Treasurer can pay the prizes immediately on the reports being read from the stand.

The Judges will not award the prizes offered, unless in their opinion the animals or articles exhibited are worthy of the premiums.

Prize animals and implements at the previous exhibitions, will be allowed to compete for the prizes; but they must receive a higher prize, or in a different class, to entitle them to a premium. Should the same premium heretofore given them be awarded, they will receive a certificate to that effect instead of the prize.

No viewing committee, with the exception of the Committee on Discretionary Premiums, shall award any discretionary premium, without the previous permission of the Executive Board, expressed through the President.

The annual address will be delivered, under the large tent, at 3 o'clock on Thursday afternoon, by Hon. Josiah Quincy, Jr., of Boston.

Immediately after the address, the reports of the Committees to award the Premiums will be read, and the premiums paid at the Treasurer's office. The Treasurer will also be in attendance at the Society's Room, at Bagg's Hotel, on Thursday evening, and on Friday, for the purpose of paying Premiums.

On Thursday afternoon, the **Premium Animals** will be exhibited on the grounds, separate from the others, with cards showing the premiums awarded to each animal, so that the public may have an opportunity of viewing the animals which have been adjudged worthy of the Premiums of the Society.

Transportation of Stock.

Arrangements have been made with the different Rail Road Companies, whose officers, with their usual liberality, have agreed to transport, *free of charge*, all animals and articles designed for exhibition at the Fair.

Gentlemen who intend to send their stock by the Rail Road, must give notice at least one week previous to the Fair, to Luther Tucker, Albany; M. D. Burnet, Syracuse; J. M. Sherwood, Auburn; L. B. Langworthy, Rochester; or L. F. Allen, Buffalo; so that the necessary preparations may be made by the companies for their transportation.

Extra trains of cars, both east and west of Utica, will be run, in which visitors to the Fair will be carried for a sum not exceeding half the usual rates on the roads. Of their times of starting, notice will be given as soon as the arrangements are completed. The Packet Boat Companies have made arrangements to facilitate the conveyance of visitors, at reasonable rates.

It is expected that that the operations of the **Magnetic Telegraph** will be exhibited on the grounds during the Fair. It is intended by the proprietors of this work, to have it ready for operation from Utica to Little Falls, a distance of twenty miles.

Articles designed for exhibition at the Fair, may be directed to the care of Farwell & Harrington, Utica, who will take charge of them as directed by the owners.

Judges to Award the Prizes.

Cattle, Class, I.—James Gowen, Philadelphia; J. S. Skinner, New-York; Thos. Hollis, Gilbertsville.

Cattle, Classes II, III, IV.—Adam Furgusson, Watertown, C. W.; F. Ingersoll, Vernon; D. D. Campbell, Schenectady.

Cattle, Classes V, and VI.—J. R. Speed, Caroline; Wm. Fuller, Skaneateles; Aaron Petrie, Little Falls.

Working Oxen.—Sanford Howard, Albany; Andrew J. Bell, Lairdsville; Squire M. Brown, Elbridge.

Steers.—E. P. Beck, Sheldon; Clift Eames, Rutland; Israel Boies, Homer.

Fat Cattle and Fat Sheep.—Ela Merriam, Leyden; Lester Barker, Clinton; P. N. Rust, Syracuse.

Stallions.—J. M. Sherwood, Auburn; Wm. Jones, Queens Co.; Edward Long, Cambridge.

Mares and Colts.—Anthony Van Bergen, Coxsackie; Willard Ives, Watertown; F. P. Bellinger, Herkimer.

Matched Horses.—Wm. Salisbury, Leeds; Duncan Robinson, Fishkill; H. S. Woodruff, Auburn.

Sheep, Class I.—W. A. S. North, Duanesburg; Robt. Musson, Gilbertsville; Jas. Parker, Jr., Trenton.

Sheep, Class II.—S. Waite, Jr., Montgomery; W. H. Sotham, Albany; Lyman Sherwood, Auburn.

Sheep, Class III.—Chester Buck, Lowville; Samuel Cheever, Stillwater; D. R. Gill, Henderson.

Sheep, Class IV.—J. P. Beekman, Kinderhook; J. M. Ellis, Onondaga Hill; M. Y. Tilden, New-Lebanon.

Swine.—L. B. Langworthy, Rochester; George Webb, Pamelia; Hiram Hopkins, Cortlandville.

Poultry.—C. N. Bement, Albany; T. H. Hyatt, Rochester; Storrs Barrows, South Trenton.

Vegetables.—D. B. Fuller, Hyde Park; B. W. Dwight, Clinton; H. L. R. Sandford, Volney.

Plows.—Geo. Geddes, Tyler; C. C. Dennis, Auburn; M. L. Brainerd, Rome.

Waggons, Harrows, Cultivators, Fanning Mills, Machines for cutting corn stalks, Horse Powers and Threshing Machines, Drill-Barrows, and Straw Cutters.—H. S. Randall, Cortlandville; G. W. Patterson, Westfield; Myron Adams, East Bloomfield.

All other Agricultural Implements.—Pomeroy Jones, Lairdsville; John Williams, Jr., Salem; T. R. Hussey, Auburn.

Butter.—E. W. Bateman, Venice; Z. Barton Stout, Richmond Hill; Elijah Rhoades, Manlius.

Cheese.—T. C. Peters, Darien; Thomas Burch, Little Falls; Harrison Blodgett, Denmark.

Sugar.—O. Hungerford, Watertown; E. Mack, Ithaca; Geo. B. Rowe, Canastota.

Silk.—Alex. Walsh, Lansingburgh; Samuel Thompson, Utica; John Walsh, Albany.

Domestic Manufactures.—Judge Conkling, Auburn; Roswell Randall, Cortlandville; Le Grand Cannon, Troy.

Fruits.—J. J. Thomas, Macedon; Chas. Downing, Newburgh; P. Barry, Rochester.

Flowers.—Prof. Jackson, Schenectady; Benj. Hodges, Buffalo; Charles Tracey, Utica.

Plowing Match.—Lewis F. Allen, Buffalo; N. S. Wright, Vernon Centre; E. Marks, Tyler; Wm. Ottley, Oaks Corners; John Johnston, Geneva.

Miscellaneous and Discretionary Premiums.—Thomas Farrington, Owego; B. N. Huntington, Rome; Joel Rathbone, Albany; J. J. Viele, Lansingburgh; Oliver Phelps, Canandaigua.

NEW-YORK STATE AG. SOCIETY.

The meeting of the Executive Committee of the State Ag. Society for August, was held at the Society's Room in Albany, on the 14th—Present,

B. P. Johnson, of Oneida, President.
E. P. Prentice, Vice-President, Albany.
Alexander Walsh, Rensselaer.
Geo. Vail, Rensselaer.
Thomas Hillhouse, Treasurer.
Luther Tucker, Rec. Sec'y.

Letters were read from Hon. Wm. H. Seward, Auburn; Hon. Luther Bradish, New-York; Hon. Josiah Quincy, Jr., Boston; Isaiah Townsend, Albany; James Gowen, Esq., Philadelphia; James S. Wadsworth, Geneseo; Francis Rotch, London; James Taylor, Birmingham; Hon. John Savage, Salem; Lewis F. Allen, Esq., Buffalo; Paris Barber, Homer.

The Board then proceeded to complete the list of Judges to award the Premiums at the next State Fair, a list of which is given above.

Transportation of Stock.

The Committee on this subject reported that arrangements had been made with the different Rail Road Companies, whose officers with their usual liberality, had agreed to transport *free of charge*, all animals and articles designed for exhibition at the Fair.

They farther reported, that extra trains would be run, in which visitors to the Fair, will be carried for a sum not exceeding half the usual rates on the roads. Of their times of starting, notice will be given, as soon as the arrangements are completed.

Splendid Sample of Wheat.

The Recording Secretary presented the following letter, with the accompanying sack of wheat:—

L. Tucker, Esq., Rec. Sec'y N. Y. S. Ag. Society:

Sir—I send you for the State Agricultural Society, a sack of the wheat considered the best grown in old Castile, and sent me lately by a friend in the North of Spain.

The Talavera wheat, already familiar to English and American farmers, is also a Spanish variety. It came originally from Estremadura, a province in the south of old Castile, and of a milder more uniform climate. The Castillian wheat, it may therefore be inferred, will prove a hardier species.

I have sent to Gen. Rawson Harmon a similar sack, and proposed to him, should its introduction be accomplished under his experienced and enlightened management, to name this variety the *Aguirre wheat*, after D. Macsimo de Aguirre, our excellent Consul at Bilboa, to whose good offices I am indebted for the specimens I have received.

Gen. Harmon remitted me last winter, for a friend in France, several varieties grown under his care at Wheatland. Ten kernels taken indiscriminately from these, weighed,

of White Provence, (French,)	8½	grains.
Wheatland Red, ...	5½	"
Virginia May,•••••••......	5	"
Soul's Red,................	5 4-10	"
Soul's White,.	5 4-10	"
Talavera, ...	7	"
Improved White Flint,*....	5	"
The "Aguirre" weighed,.......	8½	"

A person as little acquainted practically with the tillage of wheat as the writer, would infer from the above table that a certain weight of French Provence, white, or "Aguirre wheat," would furnish a greater amount of flour, and less amount of bran, than an equal weight of either of the other varieties.

The bread made from the wheat of old Castile, I have never seen surpassed in whiteness. In Spain, as you are perhaps aware, this universal article of consumption is not leavened.

What I send is for distribution, if you think worth while. I will seal up four or five pounds which might be kept in the rooms of the Society, as a standard whereby to determine the changes the wheat may undergo by culture in America. Respectfully, yours,

ISAIAH TOWNSEND.

P. S. I have just had weighed a half-peck of the wheat. The weight was 8 lbs. 9 oz., avoirdupois. This would give 68½ lbs. to the bushel. As this exceeds by 2½ lbs. the heaviest wheat (Hungarian) in Lawson's Museum, (Vide his Agriculturist's Manual, p. 14,) I think it wants verifying by a better balance than that I used, the scales of a corner grocery. I. T.

On motion of the President,

Resolved, That the thanks of the Society be tendered to Mr. Townsend for the splendid specimen of wheat accompanying the above letter; and that the same be distributed to members of the Society, with a request that they make trial of the same, and report the result to the Society.

The Rec. Secretary presented a copy of the 9th vol. of the *Farmer's Cabinet*, from the publisher, J. Tatem, Esq., for which the thanks of the society were voted.

The President was requesed to procure a windlass and dynamometer, for the trial of plows.

The Rec. Secretary and Treasurer were directed to procure the necessary badges and tickets for the ensuing Fair.

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* These weighed respectively, after being soaked 36 hours in a strong solution sulphate ammonia, 11—6¾—6¾—6½—6¾—9—7¼ grains. I have not soaked any of the Castilian variety.

CONNECTICUT CHEESE DAIRIES.

In our late excursion through Connecticut, we were glad to find satisfactory evidence that the character of that state for the manufacture of good cheese, is still maintained. The two principal cheese neighborhoods which we visited were Goshen and Winchester. The first of these towns became famous for its cheese at an earlier period than any other section of the country, but though the place still holds a prominent rank in this respect, we are inclined to think, from what we saw and heard, that for *general* reputation, "the sceptre has departed from" Goshen, and is now held by Winchester.

From Mr. A. Miles, of Goshen, a large dealer in cheese, we obtained some facts in regard to the quantity annually made there. The average quantity exported from the town, is about 500,000 pounds. The quantity of butter sold, is small, being only about 40,000 pounds per year. Cheese has fallen much in price within a few years, owing to the increased quantity thrown into market. It sells this season, while new, at five cents per pound—at home, or within the town. The average quantity made per cow is not known, but may be estimated at 300 to 350 lbs. Some good dairies make much more. Mr. Lawton sold last year an average of 403 lbs. per cow, and with what he kept for his own use, probably made 425 lbs. per cow.

Mr. Lewis M. Norton, of Goshen, was the first manufacturer of what is called *Pine-apple* cheese, in America. He commenced making this article in 1808. He had at this time no knowledge of the mode in which it received its peculiar form and qualities. He saw some which came from England, and set himself to work to imitate it. His first trial succeeded so well that he was encouraged to persevere, and he has continued to progress, until at this time, he has so perfected the whole process, from the "running up" of the curd, to the sale of the cheese, as to entirely distance all competition.

Mr. Norton is this year using the curd from ninety cows, for making pine-apple cheese. The principal portion of this curd is bought of his neighbors, for which he pays them the same price per pound that common new milk cheese brings, which is five cents this season; so that those who sell him their curd, save all the labor of pressing and curing their cheese, besides gaining considerable from the greater weight of the curd.

The curd is kept for twenty-four hours before it is made into cheese. The advantage of this, is supposed by Mr. Norton to be, that a degree of fermentation takes place, which being checked at a critical time, by the cutting of the curd, preparatory to its being formed into cheese, is not renewed after it comes from the press; thus preventing the defect of the cheese being hoven or blown.

The curd is rapidly cut into pieces of not more than a fourth of an inch square, with a machine invented by Albert Loomis, Torringford, Ct., which Mr. N. prefers to any curd-cutter he has seen. After being cut, the curd is put in a cheese cloth, placed in warm water, and the temperature gradually raised by pouring in water that is still warmer, till it reaches 105 degrees, by the thermometer. This does not *scald* the curd, which according to the practice of the best cheese-makers in England and in this country, is, we think, discountenanced. The curd is next cooled, by adding cold water, to the temperature of 88 degrees, when the whole of the water is drawn from the vat, and the curd weighed, and salted with the finest kind of table salt—four ounces of salt to ten pounds of curd—and after being well stirred is put in the press, where it remains twenty-four hours, or a longer time, as is convenient, as it takes no hurt by remaining forty-eight hours. The curd is weighed immediately over the tub, being drawn up by a pulley, and when this is done, is again lowered into the tub, where it is salted.

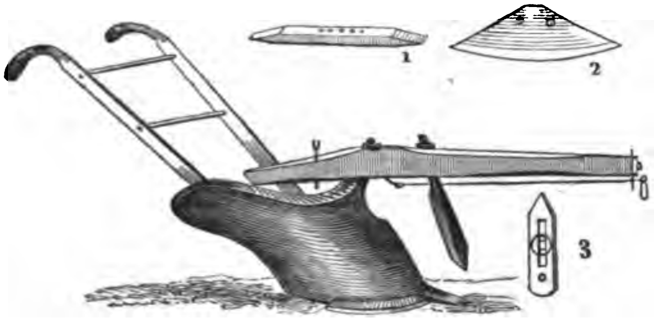
The cheeses are pressed in molds, made of sound blocks of oak timber, about twenty inches long and ten inches square. They are sawed lengthwise through the middle, and each half is carved or worked out so as to give the general shape of a pine-apple—one half in each part. From the cavity to the upper end of the block, a groove is cut in each part, which, when the parts are placed together, makes a round channel of about two and a half inches in diameter, for passing the curd into the mold. When the two parts of the block are put together in such a manner that the cavities match each other, and are strongly keyed into a frame, they form the mold for pressing the curd. The pressure is applied by means of a screw, operating on an upright, round piece of wood, which fits the channel in the block, and as it is forced down compresses the curd in the mold. The presses are very compact and strong, and appear to answer the purpose well. He has sixty-eight of them, and makes twenty-eight cheeses per day, weighing when dried five pounds each. When the cheeses are taken from the press, they are trimmed, and then placed in nets and hung in water of the temperature of 130 degrees. This is to soften the outside, that it may receive the desired impression from the net, which is done by taking them from the water while enveloped in the nets, placing them in a frame and straining the nets tightly over them by means of screws. This indents the threads of the net into the cheese in such a manner as to give them the external appearance of the fruit from which they are named. After this operation the cheeses are hung up in the nets from three to five weeks, for the outside to harden, and are then set on shelves having suitable hollows or concavities for the cheeses to rest on. In the centre of each concavity, a hole two inches in diameter is cut through the shelf, the more freely to admit air to the cheese, and to allow any liquid which may come from it, to run off. The nets used for the cheese are made of three-threaded flax-twine, and the manufacture of them costs, exclusive of the material, about 5 cents each. They will last three or four years.

Mr. Norton sells his cheese in New-York, Baltimore, and other southern cities. It usually nets him about ten cents per pound, after deducting commissions. How much greater are the actual profits derived from this kind of cheese than are obtained from other kinds, we cannot tell. Mr. Norton has evidently incurred great expense in his fixtures, and in the time and study he has spent in bringing the manufacture of the article to such complete perfection, and this ought, in justice, to secure him some corresponding advantages. He, however, makes no secret of any of the discoveries or improvements which his protracted and indefatigable labors have effected; but with a highly commendable liberality, freely permits the most minute examination of his systematic operations.

At Winchester, we were obligingly furnished with many facts in regard to dairying and other agricultural branches, by Messrs. S. & L. Hurlbut. These gentlemen purchase yearly 500,000 pounds of cheese, and are perhaps more widely known, from their long experience as dealers in this article, than any other men in the country. Mr. L. Hurlbut took us to several of the noted dairy farmers, among whom was Mr. Norris Coe, of Winchester, whose cheese is considered of the very nicest quality, and commands a quick sale in the market, at as high a price as is brought by any of the choice kinds of imported cheese. He usually obtains from sixteen to eighteen cents per pound, by the quantity, and it retails in New-York and the southern cities, at from twenty to twenty-five cents per pound.

We are unable to give the particulars of Mr. Coe's mode of making cheese. He thinks its superior excellence is attributable to peculiar management, which, being the result of a discovery of his own, he feels warranted in not divulging to the public, for the present. We however, saw the cheese in all its stages, from the curd just ready for the press, to that which was two years old. Some of the latter we tasted, and must acknowledge that it was superior to almost any other we have met with.

We noticed here that everything pertaining to the dairy department, betokened the practice of uncommon neatness. The cheese-room, instead of emitting a rank, unpleasant odor, as is in many cases observable the moment the door is opened, was so sweet and agreeable that we were prompted to ask whether spices had not been used there, but were assured that nothing of the



THE DOLPHIN SELF-SHARPENING, OR "MARYLAND PLOW."—(Fig. 84.)

Explanation of the cut. Fig. 1, the point, five-eighths of an inch thick, one and a half-inch wide, and eighteen inches long. Fig. 2, reversable share, made either of wrought or cast iron. Fig. 3, the clevice, setting perpendicularly on the end of the beam.

This plow has been lately invented, and is kept for sale by Messrs. R. Sinclair Jr. & Co., of Baltimore. It is highly recommended by those who have used it, and its construction and operation are thus described: "It is made both with left and right hand mould boards, and combines a most perfect self-sharpening principle. The points are made of steel bars, which may be reversed at least a dozen times, thus being equal in durability to a dozen ordinary points. The share may be made either of cast or wrought iron, which is also self-sharpening. The coulter of this plow is novel—instead of a single it has a double edge. The clevis or draught tackle is perfect, quite unique, and prevents the possibility of breaking the beam by sudden jerks; may be shifted to or from the land, and set deeper or shallower with the utmost precision and dispatch."

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kind had been brought into the apartment. Great care is also taken to keep the cheese in a cool and even temperature. So much attention is paid to this particular, that a perfectly dark room is constructed in the centre of another room, into which the cheese is placed as soon as it becomes sufficiently dry, and is there kept till sold. The cheeses weigh when dried, about eight pounds each.

Whether Mr. Coe's "art and mystery" of cheese-making, is, after all, anything more than a punctilious observance of well-known rules, at the head of which is *cleanliness*, we know not, but will venture the opinion that a like practice of these rules by others, would be found of great advantage.

GARGET IN COWS.

This is a disease affecting the udders of cows. It appears to be caused by milk remaining too long in the bag, which becoming coagulated there, produces inflammation, and swellings, with hard tubercles. If not counteracted, ulceration ensues, and the disease results in a greater or less permanent injury to the bag. In most cases it affects at first but one teat, or one quarter of the bag only, the use of which is frequently lost; in other instances the injury extends to one-half, and sometimes to the whole udder, destroying the secretive glands. Great milkers are most subject to it, though it is thought to be more common in some districts than others. If this is so, it may be owing to the nature of the herbage—some plants necessary to the health of the cow may be wanting. It is a common belief in many parts of the country, that the *poke-weed*, sometimes called "cocum," and in some sections, "garget," is a complete antidote to this disease. It is certain that cows which have free access to this plant, will sometimes eat the tender shoots and leaves; and this may account for the fact that cows are, (so far as our observation extends,) comparatively exempt from garget in districts where poke-weed grows spontaneously.

As a medicine for cows affected with garget, we have never known anything so good as the root of poke-weed It may be given by being cut in small pieces and fed to the cow mixed with meal or bran; or it may be given by splitting a potatoe, (a long one is preferable,) putting a thin piece of the root between the two halves, and letting the cow take the whole together from the hand. A couple of ounces of the fresh root may be given to a cow per day without injury, and in the early stages of the disease, two or three doses in connection with proper milking, and bathing the bag, (if much inflamed,) with cold water, will generally effect a visible change for the better.

In sections where from frost and snow it would be difficult to get the root in the winter season, a supply should be dug in the fall, cut in pieces and dried.

In some cases much good has been derived from a seton or rowel, made by inserting a piece of poke root in the dew-lap, just in front of the brisket. An incision an inch or two in length, is made with a knife through the pendent skin, the folds of which are then separated in a downward direction, with a stick of hard wood of the size of the little finger, having a round and rather blunt point, and a piece of the root as large as the opening will admit, is pushed in. The contraction of the skin will generally be sufficient to hold it, but a single stitch with a strong needle and thread, will be sure to keep it from coming out. In a short time the seaton will occasion a large swelling, from which, if it is properly kept open, there will be discharged a considerable quantity of matter; and this seldom fails to relieve the bag, provided inflammation has not already proceeded so far in that organ that suppuration has commenced.

Our venerable correspondent, "O. P.," of Stockbridge, Mass., mentions a case of garget or "swelled bag" in a heifer, which was cured by giving poke-root *tea*. Describing the case he says—"that the bag was so tender that she would not let the calf suck—she would not eat the cocum-mess—and all attempts to relieve her were, or seemed impracticable, and she was given over as a loss. I ordered 1¼ ounce of cocum boiled awhile in 1¼ pailful of water. A cooled pailful was set in the manger, saying 'drink or die.' The second day she drank it, and the third day she drank another pailful from the same root; and this was all that was done for her. Before she finished the cocum, she seemed pleased to have the calf nose her bag, and she made a noble cow."

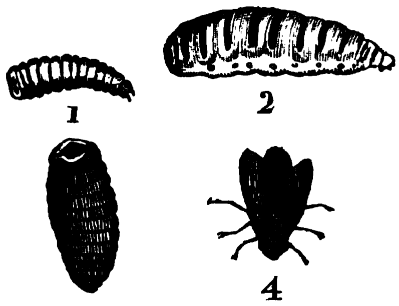
In cases where poke-root could not be had, we have used other remedies. If the inflammation was severe, we have had recourse to bleeding, and giving at the same time a good dose of glauber salts. After this, we have given about half a table spoon-full of saltpetre every alternate day, for six or eight days, in a mess of meal or bran—taking strict care always, that the milk was entirely drawn off.

Mr. Youatt recommends thoroughly rubbing the bag with the following ointment.

"Rub down an ounce of camphor, having poured a tea-spoonful of spirit of wine upon it; add an ounce of mercurial ointment, and half a pound of elder ointment, and well incorporate them together. Let this be applied after every milking, the udder being well fomented with

warm water, and the remains of the ointment washed off before the next milking."

We have spoken above, of bathing the bag with cold water to reduce the swelling, but if mercurial preparations are applied, warm water must be used.



THE SHEEP BOT—(*Œstrus ovis.*)

The family of *Œstridæ* is numerous. No less than three species are known to attack the horse; while the ox, sheep, goat, deer, and even man, in some countries, are each annoyed by one or more kinds peculiar to themselves. The habits of the different species are quite various—some breeding in the skin of the animals which they attack, (as the *O. bovis*, or ox-fly;) others breeding in the intestines, (as the *O. equis*, or horse-bot;) and others, like the species under consideration, passing the first stage of existence in the cavities of the head.

The effects of the attacks of these insects on animals, have never probably been clearly ascertained. In respect to those which attack the horse and the sheep, in particular, there has been much diversity of opinion; some contending that they are a great injury to the animals, sometimes causing death; while others suppose they occasion but little inconvenience.

Twelve or fifteen years ago, many sheep were lost in different parts of the country, as was then generally supposed, from worms in the head. Upon a particular examination, however, of some of the animals after death, the most indubitable evidence was found of the disease called *rot*, and but little doubt remained that their death was attributable to this cause. We dissected the heado fa sheep which had died from our own flock, and found in the cavities no less than forty larvæ of various sizes. Our neighbors said the death of the sheep had been undoubtedly occasioned by the worms, and that others, then exhibiting similar symptoms, would also die. But an examination of the heart and liver of the subject alluded to, as well as many *post mortem* examinations of others, invariably resulted in discovering the most marked symptoms of the rot. We have also examined the heads of healthy sheep, which had been slaughtered, often finding the worms in considerable numbers.

Still we are by no means prepared to say that the sheep is not injured by the insect; still less to admit the suggestion of Mr. Youatt, that "these bots may be servicable, rather than injurious to the sheep." We presume not to fathom the designs of Providence in the creation of this or other forms of animal life—that everything, as Mr. Y. observes, tends to a benevolent end, we would by no means deny. We must confess, however, that in this case, we are unable to discover how the attacks of the insect conduce to the health or comfort of the sheep. It is certain that the fly is much abhorred. Any one will assent to this, who has witnessed the conduct of a flock of sheep exposed to its attacks, and observed their sagacious efforts to avoid the enemy. The poor animals may be seen huddled together upon some spot of bare, dusty ground, and will there endure for hours the scorching heat of the sun. The group stand with their heads towards the centre and with their noses close to the earth. If a fly of this kind appears near, they strike violently with their fore feet, and at the same time plunge their noses in the thickest dust, which usually prevents the fly from reaching them. Sometimes the fly, darting out suddenly, will attack the sheep while quietly feeding, and succeed in leaving its egg in the nostril. In such case, the animal instantly exhibits the greatest uneasiness—shakes its head, stamps, and runs off furiously to some dusty spot, or protected corner.

Soon after the egg is deposited, it is hatched, and the young larvæ makes its way up the nasal sinuses to the cavities over the eye and around the brain. The motion of the worm is obviously disagreeable to the sheep, as is shown by its restlessness, sneezing, &c.; but when it has reached its destined place, and remains nearly stationary, we have not been able to discover that it occasioned pain, or sensibly affected the health of the sheep.

The attack of the fly continues from May to August, and the larvæ from the eggs first deposited, reach their full size and are ready for transformation on the return of warm weather the next spring. The efforts of the full-grown worm to escape from the head, appear sometimes to create disquietude and pain. They work their way out of the head as they first ascended, and crawl into the ground or the rubbish of the sheep yard. Their skin gradually shrinks and hardens, and they are soon formed into the chrysalis. In from forty to sixty-three days, according to the experiments of Valisnieri, the perfect transformation takes place, and the fly comes out. The variation in the length of time the insect remains in the pupa state, is dependent on the temperature—maturity being hastened by warmth. Though most of the worms leave the head of the sheep to undergo transformation, it is certain that all do not. We have sometimes found shells of the chrysalis in the sheep's head, showing that some reach the fly state before leaving.

Not having had an opportunity of examining this fly with sufficient minuteness to give a particular description, we take that of Mr. Youatt, as follows:—"The fly is considerably smaller than the size of the larva would indicate. Its head and corslet taken together, are as long as the body; and that is composed of five rings, tiger-colored on the back, with some small points and larger patches of a deep brown color. The belly is of nearly the same color, but has only one large circular spot on the centre of each of the rings. The length of the wings is nearly equal to that of the body, which they almost entirely cover. They are prettily striped and marked. The eyes have the appearance of net-work, and are of a deep and changeable green color. They occupy less space upon the head than those of most flies. In the small space between them, are placed three other minute eyes in the form of a triangle. They may be discovered in a tolerable light, or by a lens of small power. The rest of the head is yellow, and seemingly hollow. It appears as if it were perforated by a great number of small holes, like a piece of sponge, and at the bottom of each of these cavities, a small black spot appears."

The figures in the above cut are also taken from Mr. Youatt's treatise. Fig. 1 shows the larva or the bot of the œstrus ovis, half grown; 2, the same at its full growth; 3, the œstrus ovis in the pupa state; 4, the œstrus in the perfect state, giving a full length view of it.

To prevent the attack of the œstrus, it has been recommened to smear the noses of sheep with tar. We are unable to speak from experience of the efficacy of this. It is claimed that the odor of the tar, deters the fly from alighting to deposit its egg. It is evident however, that to answer any purpose, it should be applied with such frequency as not to become much dried on the sheep. Scotch snuff is sometimes thrown up the nostrils of the sheep, as recommended by Mr. Jewett, page 56, of this volume of the Cultivator. The irritation produced by the snuff brings on sneezing, by which it is thought the worm is ejected, and the head besides cleared of its unhealthy humors.

Several years ago, we adopted the use of the trephine, to relieve the difficulty occasioned, (as we then thought,) by worms. By trepanning the skull a little above each eye, some of the worms were taken out, and by pouring oil into the cavities, it was supposed the remainder would be destroyed. The operation being completed, the skin was closed over the aperture made by the trephine, and the wound soon healed. It is not probable, however, that the use of this instrument can be made general; and indeed with the imperfect knowledge which at present prevails in regard to the effects occasioned by the insect, we are not prepared to recommend it. The best course, in our opinion, is to keep the sheep in good condition, that the circulation of the blood may be free, and the secretions natural. This will give the animals health and strength, by which they will be better enabled to throw off the worms whenever discomfort is experienced from them.

HINTS FOR THE SEASON.

Autumn is a favorable part of the year for making improvements on the farm. After the hay, the wheat, and other small grains have been secured, there is a lapse of time before the latter harvest demands attention, which furnishes a good opportunity for clearing fields of stumps and stones, making fences, improving meadows and pastures, reclaiming swamps and wet lands, digging peat and muck for manure, &c. The present season has been so dry that wet grounds may be worked on to good advantage, unless there should soon be heavy rains.

Moist grass-lands, whether in meadow or pasture, are liable to be more or less injured by the growth of bushes, rushes, and wild, worthless vegetation of various kinds. The most effectual remedy for this is thorough drainage, which should therefore be the first object. Bushes had better be pulled up root and branch. They generally grow in stools, raised a little from the general bed of the field, and may be readily torn up with a *root-claw*, (or in default of that, a plow,) to which oxen are attached. When the bushes are large they should be cut, in order to give a chance to get at the roots.

Tussocks of flat, wild grass, and small knobs, or bunches caused by moles, ants, &c., frequently occur on the surface of pastures and meadows. These should be cut off. If not too tough, they may be put at once into the hog-pen or barn-yard, to be wrought into manure; or they may be piled in heaps to lay till rotten before being used; or the hardest and toughest tussocks may be burnt, as soon as they are a little dried, and the ashes spread on grass grounds, or used for other crops. They make a large quantity of ashes, especially if taken from a mucky soil, and they produce very good effects, (as we have proved,) when spread on grass, turneps, or grain. The best mode of burning is to collect the tussocks into piles. Commence a fire in the centre, and when a few get well on fire, heap on a large quantity. The fire should work slowly, with as little flame as possible.

What is called a *bog-hoe*, is a proper tool for cutting tussocks. They should be ground to a sharp edge, to do the work easily and well. We have seen, at the implement warehouses in Boston, a tool to be drawn by oxen or horses, for shaving excrescences from pastures and meadows. We have no personal knowledge of its operation. Will some one who *knows* tell us how it works?

Peat or bog earth, designed for compost, or for spreading on cultivated fields, is much better for being dug sometime before being used. The action of the air, the frost, and the rains, dissipates its sourness, and a partial fermentation or decomposition takes place, by which it is pulverized, and brought into a good state to be applied to plants. The banks of ditches should be hauled to the barn-yard, or piled on dry land. If the ground is too soft and miry to admit of a team going on it, let the muck remain where it is first thrown out till winter, when the ground becomes frozen sufficiently to bear a yoke of oxen and sled; and then the muck can be easily cut into junks and carried off.

Peat or muck that has undergone a fermentation mixed with ashes and saturated with urine, is one of the best manures for gardens and nurseries that can be used, as it contains few or no seeds of weeds that will grow on dry ground.

That process of improving land called PARING and BURNING, though seldom practiced in this country, we feel sure, from what we have seen, might be adopted in many cases with excellent advantage. The operation consists in cutting a thin slice from the surface of sward or old grass lands. The sods are dried and burnt, and the ashes spread over the land. It is most beneficial to clayey soils and those impregnated with iron—the iron being converted by the fire into what is called a peroxide, in which state it is harmless to vegetation.

The advantages of paring and burning are several; it destroys the seeds of weeds, and much of the foul growth with which the land may be filled; it also destroys many insects and their eggs, and furnishes in the ashes and calcined earth, a powerful manure, impregnated with alkaline salts and carbonaceous matter, which is found highly beneficial in correcting the tenacity of clays, and converting them into friable loams.

We are so well satisfied of the advantages of this operation, that we intend to call attention to it again, giving a more particular account of the process and its effects.

INFLUENCE OF ELECTRICITY ON VEGETATION.

We have heretofore forborne any remarks on this subject, believing that sufficient facts have not as yet been collected to justify positive conclusions; and knowing the avidity with which novelties are sometimes seized on, we have been cautious in laying accounts before our readers which might tend to lead the unwary astray.

Among the papers which were read at the late meeting of the British Association for the Advancement of Science, was one by Mr. EDWARD SOLLY, "On the Influence of Galvanic Electricity on the Germination of Seeds." In the London Gardeners' Chronicle, we find a synopsis of this paper, from which the following is condensed:

Mr. Solly took a general view of all the experiments which have been reported in reference to this subject. He began by describing those of Sir H. Davy, and then described the recent experiments, giving an account of an extensive series at present being made in the gardens of the Horticultural Society.

"Seeds of barley, wheat, rye, turnep, and radish, were, in several different experiments, found to germinate with increased rapidity, when exposed to the influence of a feeble current of electricity of very low tension, and the plants not only came up sooner, but were more healthy than others. These experiments certainly appeared decisive in favor of the stimulating effect of electricity on germination, as distinguished from the mere chemical effect produced by electricity; but, on the other hand, a number of experiments on other seeds had given quite opposite results, proving either that the germination of some seeds was retarded, whilst that of others was facilitated by electricity; or, that the effects, observed in both cases, were merely incidental. Out of a series of 55 experiments on different seeds, 20 appeared in favor of electricity, 10 against it, and 25 showed no effect whatever; and on carefully counting the whole number of seeds up in the entire series, there were found 1250 of the electrified, and 1253 of the non-electrified seeds up. In conclusion, Mr. Solly stated that he felt very doubtful whether the effects observed were really due to the influence of electricity.

"Professor HENSLOW regarded this paper important, as showing how careful practical men ought to be, in arriving at conclusions upon insufficient evidence. Many persons believed that electricity exerted an influence on vegetation, from the instances of beneficial effects which had been brought forward, but they must now be regarded as purely accidental.

"Dr. DAUBENY stated, that although he had from the first doubted the influence of electricity on plants, he had, nevertheless, tried experiments, and come to the same conclusion as Mr. E. Solly.

"Dr. PERCY did not think Mr. Solly's experiments conclusive, as to the action of galvanism on the productiveness of plants. It was alleged that plants yielded more fruit from the action of electricity, but Mr. Solly's experiments only proved that their vegetative functions were not more vigorous.

"Mr. JOHN BALL believed that electricity exerted a constant influence on plants, and he regarded it as an agent in determining many of their peculiar forms. He believed it could be demonstrated that there was an antagonism in the electricity of the cellular and vascular tissues, and that the peculiar organs, as the hairs and spines, developed by those tissues were dependent on this fact."

Since the above was prepared for publication, we have received the following, in relation to the same subject, from a scientific correspondent:

"Many newspapers contain marvellous stories of the remarkable effects of common electricity on vegetation. One experiment has been minutely described and illustrated by a diagram, and consists merely of a buried wire enclosing a piece of ground, and connected with iron rods rising some feet above the surface like common lightning rods. The land thus enclosed is stated to have produced a very heavy crop, which it may have done from other causes; but to suppose that the electricity had any influence, is of course ridiculously absurd. For the wires not being insulated, the trifling amount of electric fluid which may descend, passes off instantly into the earth; and if they were insulated the case would be in no wise different. The fluid always following the best conductor, the plants could not be electrified in the slightest degree by any management. A man may hold a lightning rod in his hand in a hard thunderstorm, and receive no injury, the fluid passing through the rod directly to the earth. And if the plants were actually electrified, it is by no means probable that any perceptible effect would be produced. It is well to distinguish real scientific discoveries from humbugs—to discriminate between good bills and counterfeits."

ENGLISH AGRICULTURAL COLLEGE.

In our last we mentioned, in a brief paragraph, that this Institution was shortly to go into operation. Our late English papers give some particulars in relation to the plan on which it is to be conducted, and as agricultural education is beginning to be regarded with so much attention in this country, we presume the doings of other nations in regard to this important subject will be looked upon with interest.

The Institution is located at Cirencester, in Wiltshire. Attached to it is a farm of 410 acres, 380 of which are arable, and of a varied character of soil. The general outlines of the plan and mode of management, so far as we have seen, appear to be judicious, and of an economical character.

"The farm," (it is said,) "will be cultivated on the best established system, and will combine the breeding and feeding of stock, with a dairy. Every description of trial and experiment will be made in such a manner as not to risk general results, it being the determination of the council that the system pursued on the farm shall be the one most profitable, and such as the pupils may adopt with confidence in their future occupations. Still a portion of land will be set apart for experiments with manures and various seeds."

The management of the farm is to be entrusted to a man (Mr. Scales,) who it is said is thoroughly versed in the minutest details of good husbandry. The farm laborers are to be chosen with great care; and that the pupils may obtain a thorough knowledge of all farming operations, a portion of the work will be allotted for their performance. The buildings are to be erected with such a view to economy of cost, that they may be safely adopted on any farm of similar size and character.

"The College is situated on the farm. The building will include a large dining-hall, class-rooms, laboratory, museum, besides ranges of sleeping apartments on two floors, throughout which the best mode of heating and ventilation will be adopted, and separate rooms will be provided in case of illness. The head master and the professors will reside in the College. The schools will be under the management of the different professors, who will be constantly on the spot, and give their whole time to the pupils. The instruction will be conveyed not merely by lecture, but also by individual study and practical working. Mr. Way has been chosen as chemical and geologicial professor. Professors will be engaged to instruct in botany, natural history, mathematics and physics, drawing, mechanics, gemometry, dynamics, levelling, mapping, surveying, building, hydrostatics, hydraulics, &c., more particularly as they have reference to agriculture. The structure and treatment of the diseases of cattle, and a simple but accurate system of farm accounts, will form part of the instruction.

"Pupils who have at the least a knowledge of reading, writing, arithmetic and grammar, will be admitted from the age of fourteen to eighteen years; no pupil to remain after twenty. Their time will be divided between in-door instruction and out-door occupation. There will be frequent examinations, both public and private, and certificates of proficiency will be given them on leaving the Institution. They will board and lodge in the College. Each pupil will have a separate bed, and every attention will be paid to health and comfort. Each pupil will pay £30 [about $150] per annum, by half-yearly instalments, in advance. Probably two vacations will be given in the year; a short one between hay and corn harvest, and a longer one at Christmas."

STATE OF THE CROPS.

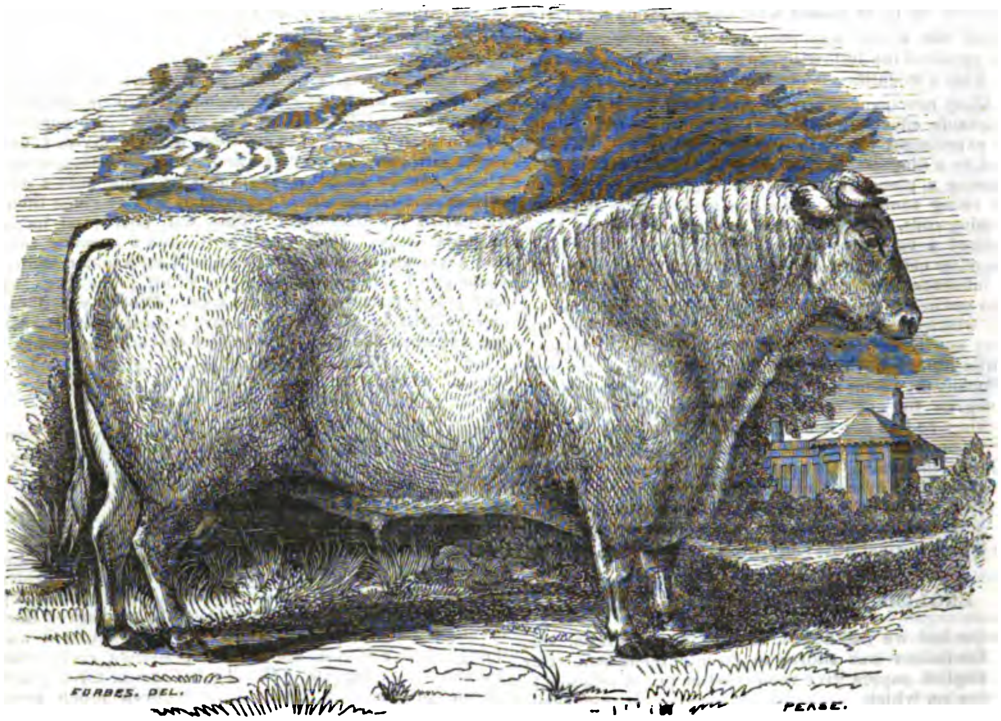
Hillsboro Co., N. H.—A letter dated Aug. 9, from J. L. Eaton, East Ware, informs us that there has been but little rain in that vicinity since the snow went off last spring—not so much as has sometimes fallen in a single day. The hay crop is not more than two-thirds an average yield. Wheat is well filled, but the heads are short. Wheat has been an uncertain crop there for several years, owing to the worm or maggot (*Cecidomyia tritici*) in the head—it sometimes destroyed nearly the whole crop. To avoid the insect, it was sowed late, but the late sown was liable to rust. Afterwards, it was thought better to risk the worm by sowing early, than the rust by sowing late. For the last two or three years, till the present, the insect has not been much seen. This year it has appeared in nearly all wheat fields, but has not been very destructive. Winter rye is light—oats good considering the drouth. Corn on dry land will not be much. Potatoe crop uncertain; much rain is wanted to give a fair crop of corn or potatoes. The rot has not yet troubled the potatoes in that neighborhood. The crop was good there last year.

Alabama.—From John H. Dent, Esq., of Eufalla, we have a letter dated August 7th. He gives a gloomy account of the cotton crop. The drouth is said to have been more severe than was ever known before. The ground has not been wet four inches in depth since March last. There are a few neighborhoods that have had timely rains, and have made fine crops. In general, Mr. D. considers the "cotton crop at an end, and it is daily exhibiting a more sickening appearance." He says—"our only hope for so sad a disaster, is an advance of cotton." Corn crop is very short, but it is added "by sowing grain this fall, we may have enough for domestic purposes."

Western New-York.—Samuel Williams, writes from Waterloo, Aug. 10th—"Wheat in our vicinity has been much injured by the rust. Many pieces were struck in our warmest driest weather. Hay is a middling crop; oats middling, but shrink; barley, flax, and Indian corn, very good; potatoes very light, but so far uninjured by *rot*. The last few days have been the hottest of the season. Last evening, we had two inches of rain."

Pennsylvania.—A letter from A. Langdon Elwyn, dated Reculver, Westchester county, Aug. 19th, states—"the frost of 31st May destroyed nearly all the wheat in this neighborhood. Little or none of the Mediterranean variety escaped, it being more forward than any other. What is known as *white* wheat was not injured. The early maturity of the Mediterranean wheat is an objection to it; but in a climate like ours, who is to calculate or guard against summer chills?"

South Carolina.—W. B., Laurens District, writes, Aug. 10th—"Our oat crop was a failure; wheat is light, but the berry is as fine as any I ever saw. Corn is scarce. It is now selling at 87½ cents to $1 per bushel. I do not think the price will be sustained this fall, for in some parts of the state, the crop is said to be better than ever before—especially creek and river bottoms."



IMPROVED SHORT-HORN BULL "KING CHARLES 2d."—Fig. 86.

The above is a most accurate portrait of the imported Short-Horn bull *King Charles 2d,* owned by JAMES LENOX, Esq., Netherwood, Dutchess county. The pedigree of this animal is given in the fourth volume of the Herd-book, as follows:

"4154, KING CHARLES 2d, bred by Mr. Whitaker; got by Sir Thomas Fairfax (5196)—d. (Lingflower,) by Ellerton's bull—g. d. (Gillyflower,) by Young Colling, (1843)—gr. g. d., by Allison's Danby—gr. gr. g. d. by Pink Bull, bred by Mr. Leonard Carter, of Applegarth."

Mr. Lenox has also several cows imported at various times. Of one of these, *Red Lady,* our readers will remember, we gave a fine portrait, on steel, in the first no. of our present volume. *Daffodil,* another very superior cow, imported with Red Lady in 1840, he has been so unfortunate as to lose. She died of milk-fever, shortly after having her calf last spring. *Gayly,* imported in 1841, is a fine showy cow, evincing a great tendency to fatten. Mr. L. has also a fine Ayrshire cow, showing excellent points as a milker, and for constitution. Mr. L. informed us, that she was equal, for the dairy, to any cow in the herd.

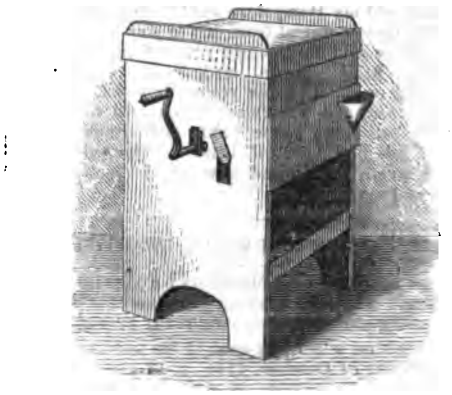
From these cows, he has several heifers, (some of which have now had calves,) that are very promising. With a yearling and a two-year-old, out of Daffodil, and a two-year-old and a calf out of the Ayrshire cow, by King Charles 2d, we were particularly pleased.

Mr. Lenox keeps the South Down sheep, of which he has a very pretty flock of about sixty. He is well pleased with them on account of their hardiness, and especially for the superior quality of their mutton. He remarked that he had frequently sent carcasses of the mutton to his friends, without their having any knowledge of the breed, and its excellence never failed to excite remark and inquiry in relation to it. The quality of the mutton of this fine breed is beginning to be properly appreciated in our cities.

Of swine, Mr. L. showed us some very pretty Berkshires, and a very fine Neapolitan sow, with several of her progeny of various ages, by a Berkshire boar. The cross bred stock look exceedingly well, being of fine form, and apparently hardy. We should think the best Neapolitans would make a desirable cross with the Berkshires—especially the larger class of the latter. Mr. L. has several full blood Neapolitans at his place in New-York, but the sow mentioned is the only one kept at the farm.

The team work of the farm is done partly by horses and partly by oxen. Of the latter, we saw two yoke that were large and strong. But we were particularly pleased with three or four of the carriage horses which were shown us. One of them in particular, a colt five years old, bred by Mr. Neefus, near Flatbush, Long Island, is one of the most splendid horses we have ever seen. It would certainly be of service to know exactly how such a noble animal has been bred and reared.

Mr. Lenox's farm consists of upwards of two hundred acres. He purchased it about seven years ago, at which time it was much out of order. All the buildings and nearly all the fences have therefore been erected by Mr. L. who has spared no pains to render them as perfect as possible in their design and completion. The place embraces a great variety of surface, which has rendered it susceptible of being laid out and improved in a highly ornamental and tasteful manner. The mansion, which is approached from the main road by a long avenue, winding through beautiful groves, is situated on a delightful spot, commanding the most charming landscape views on the banks of the Hudson. To the south, the village of Newburgh, though seven or eight miles distant, is brought plainly before the eye; and all the various objects which mark the scene, with almost every inch of the surface of the river may be readily seen till the noble stream is suddenly lost from sight in its deep gorge through the Highlands. To the north, also, the view is scarcely less beautiful, embracing as it does a rich and varied picture of cultivated fields, thriving villages and towns, woods and mountains. Indeed, considered both in reference to its natural advantages, and the embellishments which wealth and taste have bestowed, Netherwood is a place exactly fitted for the abode of contemplative and well cultivated minds.



CROWELL'S THERMOMETER CHURN—(Fig. 87.)

These churns are recommended by those who have used them several years, as being superior to any other kind they have ever tried. "The churn is constructed," (say the manufacturers,) "so as to bring the milk or cream to the exact degree of heat which is required to produce the greatest quantity and best quality of butter." A thermometer is placed in one end of the churn, by which the operator can ascertain when the milk or cream has the proper temperature, which practice shows to be 62 degrees. If, when put in the churn, the cream is too cold, warm water is turned in, by means of a tunnel at the side of the churn—if it is too warm, cold water is added till the requisite degree is reached. These churns, and also the patent-right for using them, are for sale by A. & **Wm. A. Crowell**, manufacturers of agricultural implements, Lyme-Rock, Conn.

AURORA HORTICULTURAL SOCIETY.

We had the gratification of attending the fourth monthly exhibition of this society, held at the village of Aurora on the fifteenth of last month. It is a decisive proof of the energy and interest which prevails, that each succeeding exhibition, though occurring as often as each month, has increased in brilliancy and attraction.

On the present occasion, the display of fruit was necessarily small, owing to the great and general destruction caused by the severe frosts of early summer. Several fine and choice collections were however presented, and among others about twenty different varieties in fine eating condition from one cultivator. We noticed three varieties of ripe peaches, though the crop suffered a nearly total destruction this year.

But the collection of flowers more particularly excited warm and general admiration. Not only were the specimens numerous and splendid, but the tasteful arrangement for display we have scarcely if ever seen equalled. They occupied a platform which extends across one end of the large public hall used for the occasion. On the right and left was a fine collection of green house plants, some of them in splendid bloom: and in the centre, on light shelves, rising successively to near the ceiling, and extending a length of 30 feet, were a most brilliant profusion of cut flowers, arranged with great skill, the brilliancy of which was much increased by transmitted light from behind, blending with the copious reflected light in front. Among the contributors were a large number from the immediate neighborhood, together with splendid collections from Auburn, Ithaca, Rochester, and other places.

Several hundred persons were assembled to witness the exhibition, and during the afternoon were addressed with much effect by H. R. Schoolcraft, C. Mattoon, and Wm. H. Bogart. The awarding committees reported, and the flowers and fruit were then sold by auction on the spot, which enabled the spectators to avail themselves of a much better view of each specimen individually, and to possess them if they chose. As an indication of the merit of the collection, and the skill of the contributors, as well as the taste of the purchasers, it may be mentioned that at a similar sale a month before the avails from the cut-flowers alone amounted to about fifteen dollars, and on the present occasion to more than twenty-one dollars, several single bouquets selling freely from three to four dollars. David Thomas is President, and Alexander Thompson, Secretary, and to their indefatigable exertions, especially of the latter, with those of the entire committee, the remarkable success of an inland neighborhood institution such as this, is to be mainly ascribed.

FARM OF JAMES GOWEN.

In the *Farmer's Cabinet* for June, is a copy of the report given by Mr. **Gowen** of his farm, to the Philadelphia Society for Promoting Agriculture. We should be pleased to copy the whole of the report, but want of room allows us to make only the following summary and extracts.

The farm is located near Philadelphia, and now contains about 100 acres, exclusive of woodland. Mr. G. took possession of it in 1834, at which time it is represented to have been in a very worn down and poor condition, from the neglect and bad management of previous owners. Mr. Gowen took away the old fences, made a new division of the farm, and fenced with stone-walls and hedges of the Osage orange, drained, and filled up ravines and gullies.

The land is now brought into a high state of cultivation, producing 100 bushels of corn, 400 bushels potatoes, 50 bushels wheat, &c., to the acre. He at first bought manure from the city, but after three or four years' experience, he gave up the plan, and has since made enough on his own premises, excepting light dressing. To do this he has been obliged to increase his stock of animals. "To maintain this stock," he says, "and bring my land to a high state of cultivation, by the most efficient and economical practice, has been a leading object; and to accomplish this, required no ordinary management on such a farm. The stock in cattle has ranged for years, from forty to fifty head, in addition to the necessary horses, with a large stock of swine for breeding and fattening; and these I have fed from the produce of the farm, except the purchasing occasionally of some straw, and supplies of mill feed for the horses and swine, and some meadow hay for the cattle, selling frequently its equivalent in timothy. During the same period I have sold hundreds of bushels of rye, some wheat, and on an average, four hundred bushels of potatoes annually, with some three to four hundred bushels of carrots, besides providing for the family. But the chief income was derived from the cattle.

"My expenditures during the whole period, could not be otherwise than large; as I could not put up so much stone fence, and picket fence, as encloses my farm without incurring a heavy outlay; but I view these improvements as cheap in the end. It may be safely inferred, that there is not at this day, any farm of the same extent in this part of the country, that can so easily be worked, or will require so little expense for a series of years in keeping the fences in order, especially when the hedges are taken into account. I am also of opinion, that taking in view the condition of the soil, as to depth and richness, as well as its being entirely free of stones and other impediments, that I can make it produce as much as any farm of its size in any part of the country, for a series of years, and at as small an expense.

"The secret of keeping so large a stock on so little land, consists in my practice of partial soiling, and green crops, whereby I make some four or five acres do the work of thirty acres, in the "slow and easy go way." From May to August, my cattle are confined to one or two fields, most commonly one, to which they are driven, more for exercise in the cooler parts of the day, than for pasture; they being fed in the stables early in the morning, at noon, and at night, with food cut for them from a lot adjoining the barn-yard. The food is generally of lucerne, orchard grass and clover, oats and corn. The patches from which the corn and oats are cut, are always sowed with turneps in August. No one can credit, unless he has had proper experience in the matter, the quantity of food that one acre of lucerne, one of rich orchard grass and clover, and one of oats and corn, afford from May till August, nor can he estimate the great saving in manure, much less the comparatively good health of the cattle, from not being exposed on the naked fields, under a fervid sun, toiling all day in search of food. This practice allows me to crop almost the whole of the land, and to make some 120 to 150 tons of hay annually. In the fall, from August till November, the cattle have the whole range of the mowed lands, as I do not cut second crop grass for hay. Then for winter feed, I have always an acre of sugar beet, half an acre of sugar parsneps; half an acre or more of carrots, for my horses; and generally from three to four acres of turneps. I report to the Committee on Crops this season, over 100 tons of these roots. In 1843, I gathered from one acre, 1078 bushels sugar beets, 60 lbs. to the bushel; carrots at the rate of 687 bushels; sugar parsneps, 868 bushels. This year 972 bushels sugar beets; 970 bushels carrots; 700 bushels sugar parsnep; and from three and a half acres, 2500 bushels of turneps, sowed with timothy seed.

The farm buildings consist of three substantial stone barns, one 70 feet by 33, another 50 by 26, and another hipt roof with cupola, 57 by 25, besides a large overshoot stable and hay house, stable high of stone, 60 feet by 30—the lower floors of all these are made of broken stone and lime, planked, being vermin proof. There are also, a corn crib capable of holding 1200 bushels of corn, one barrack, ample hog-pens, and sheds for carts and wagons. The barn buildings have been filled this fall to their utmost limit, except the corn crib.

"A substantial stone wall encloses the principal manure heap; the drainings from this heap are led into a place of deposit, in which are received also a drain that runs under ground from the kitchen, as well as drainings from the pig-pens, and the washings from all the yards. These drainings form an important item in the supply of manure to my land; it is a saving which I cannot estimate at less than $200 a year. This liquid by a simple process is applied to the patches of roots, &c., and to this may be ascribed my great success in raising such crops.

"Of *Improved Cattle*, my first effort was with the celebrated "Dairy Maid," still owned by me. Her first calf, LEANDER. by *Whitaker's* PRINCE OF NORTHUMBERLAND, was reared and kept by me, for breeding. DAIRY MAID'S calves alone, exclusive of Leander, have already sold for more than $500. It would be curious to trace her profit at this day, by stating an account of her first cost, her keep, and that of her son Leander; crediting her by sales of her own calves and grand calves; deducting for the portion of the capital which was invested in the dams that produced the grand calves. To do this, would extend this paper to an unusual length—suffice it to say, that Dairy Maid has long since paid for herself, and that those who laughed at me for giving $540 for one cow, may turn this statement over in their minds, and think, whether since 1838 any investment of theirs, to the same amount, in any other branch of husbandry, has paid so well.

But there is a satisfaction beyond that of the pocket, and that is, that Dairy Maid's breed will be of infinite service to the country. Her calves and grand calves, are pretty well scattered already—and I make no doubt, but wherever found they will demonstrate the high character of the parent stock.

My sales for the last two years, exclusive of Dairy Maid's calves, amount to over $2000. The stock now on hand is about 40 head, principally Durhams. The butter sold for the last two years exceeds $750; this is a respectable item, when the calves that were reared, and the supply for my family are taken into view. From early fall to spring, the butter averaged 70 lbs. per week —the quality highly appreciated abroad, as well as at home.

"In the hog line, I have been quite successful, at least in bringing the animal by judicious crossing, to great perfection. I fatted off my old Lincoln, and Berkshire Boars, and my Hampshire and Chester county sows, last month; they weighed from 400 to 450 lbs., sold for $86.24. Have sold the last two years of pigs, designed for breeding, $150. Bacon, lard, &c., over $120, besides, having on hand 14 fine young barrows, last fall's pigs, now ready for slaughter, which will weigh from 250 to 300 lbs. each, value $150. The stock on hand consists of one fine boar of Lincoln, Hampshire, and Berkshire breed; one brood sow of Berkshire breed, 12 shoats and seven pigs."

FAIR OF THE AMERICAN INSTITUTE.

From the circular of the Managers we give the following extracts. They are making vigorous efforts to render the coming exhibition superior to any preceding one:

The exhibition will be opened to the public on Monday, the 6th day of October, 1845, at 12 o'clock, M., at Niblo's Garden, Broadway, in the city of New-York. Contributions from exhibitors will be received on Thursday, Friday and Saturday of the previous week. To insure the most favorable locations, and the advantages of competition, the products of the Manufacturer, Mechanic and Artisan must be delivered and entered on the books of the Fair, on one of those days. The chance of a good location will be in favor of those who come the first and second day. Fruits, Flowers, &c., form an exception. The proper time for entering them will be specified in the agricultural and horticultural circular, or notices hereafter to be issued.

On Thursday, the 9th day of October, a National Convention of Farmers and Gardeners, and Silk Culturists will be held. Circulars, with questions prepared, will be issued. Washington's Home Department of Agriculture, recommended by the Institute, and unanimously approved by a National Convention held last year, will again be urged.

For the second week, has been assigned the show of cattle, horses, and other live stock, and the plowing and spading matches. To accommodate those interested in the cattle show, a beautiful plot of ground has been secured between Twenty-third and Twenty-fourth streets, near the intersection of Broadway and the Fifth Avenue, with commodious rooms on the premises for accommodating the committees. The plowing and spading matches will be held in New-York, or its vicinity. For particulars, see agricultural circular.

The anniversary and other addresses will also be delivered in the course of the second week. The horticultural exhibition of vegetables, fruits, flowers, &c., will be in Niblo's long promenade, superintended by eminent horticulturists. Great varieties of rare seeds have been, the last year, scattered by the Institute over our country, with the express understanding, that a portion of their products be brought to the Fair, to swell the beauties of the display.

The best new and useful inventions will be objects of the highest honors. Also, establishments affording large varieties of specimens of well constructed agricultural and horticultural machines and implements; but in no case, for want of competition, or other cause, will any article be entitled to premium, if adjudged intrinsically not deserving particular commendation.

DEPTH OF PLANTING CORN.

No. 1,	1	inch deep,	come up in	8½	days.
2,	1½	"	"	9½	"
3,	2	"	"	10	"
4,	2½	"	"	11½	"
5,	3	"	"	12	"
6,	3½	"	"	13	"
7,	4	"	"	13½	"
8,	4½	"	"		
9,	5	"	"		
10,	5½	"	"	17½	"
11,	6	"	"		

Nos. 8, 9, and 11, were dug in 22 days; No. 8 was an inch below the surface, and 9 and 11, 3 inches below. No. 10 was very weak and died in 10 days.—*Burger*.

INQUIRIES.

Ribbon Houses.—T. C. (Sullivan, N. Y.) We are not in possession of any more particular information in regard to this kind of buildings, than we gave in our Feb. No., (page 42 of this vol.)

Charcoal.—B. S. (and others.) That from hard wood is considered best for agricultural purposes, and we believe that from maple is as good as any. Pine and hemlock make lighter coal—whether the same *weight* of it would be worth as much as that from hard wood, we cannot tell. Try both kinds, and you may then know.

Ice-house.—"What is the most approved plan of constructing an ice-house, where the springs at certain seasons of the year, are within four feet of the surface of the ground?" Query by "B. S." If any one will answer it, we shall feel obliged.

Burnt Clay.—B. S. We should think unburnt clay would be best for a sandy soil, because by burning it loses in a great measure its adhesiveness, and its attraction for water, which constitute its value for sand. We have no personal experience in burning clay, though we have partially witnessed the process. It can best be described in the language of Mr. Rham, in his "Dictionary of the Farm:"

"To burn clay, it is dug out in lumps and dried; heaps are made of these at regular distances in the field, with a small cavity in the centre, in which dry furze and brush-wood are introduced. This being lighted, the fire is allowed to burn slowly, and the smoke kept in by adding a sod or clod wherever it bursts out. When the heap is once burning, more clay may be added, even without being dry, and the combustion goes on without other fuel. It must be so managed as to bake the clay without heating it too much; and when the heaps are cooled and opened, the whole should appear pulverized, and of a red color, if oxide of iron exists in the soil. A coat of two or three inches thick, spread on a field and plowed in, will greatly improve its texture; but sufficient animal or vegetable manure must be added to make it fertile."

Soaking Seed-wheat.—A. W. (Huntington, L. I.) The length of time the grain may safely remain in the solution, depends much on the degree of temperature in which it is kept. Mr. Campbell soaked his seeds in muriate and sulphate of ammonia, from forty to sixty hours, in a temperature of 70 degrees. We presume there would be no risk in soaking wheat twenty-four hours at that temperature.

Sulphate of Ammonia.—C. F. (Morristown, N. Y.) Sulphate of ammonia is often used instead of muriate, in steeping seeds. Experiment only can decide which is the best. We do not particularly know about Dr. Feuchtwanger's compound of sulphate of ammonia, nitrate of soda, &c.

Sandy Land.—A. W. The soil would probably be improved by spreading on clay or any good soil of a more compact nature than that of the field. We are not aware of any objection to the use of lime where ashes have formerly been applied. The lime had better be kept near the surface.

"Hooks."—L. F. S. (Highgate.) The only remedy we have ever heard for this disease, is to cut out the gristly substance which grows in the eye. We believe this is done by the use of small hooks and sharp scissors.

Castor-oil Bean.—T. H. (Troy, Miss.,) wishes to be informed of the proper mode of harvesting this plant, and of manufacturing and clarifying the oil.

Hussey's Corn and Cob Crusher.—The proprietor of this article is requested to give information through the Cultivator what speed per minute the machine should have, and how to prevent the steel cutter from choking so as to stop the machine.

Swamp muck, Charcoal, &c.—B. N. (Ipswich, N. H.) Swamps should first be drained. The wild growth should then be subdued. and they may be sown with grass-seed, or cultivated, as may be deemed most profitable. One of the best modes of using muck is to mix it with animal manure, especially to absorb urine. Hog-pens, cattle and sheep-yards, should be covered with a layer of it to take all the urine and the soak of the manure. Where there are barn cellars, it should be kept under the cattle and horse stalls. It will answer a good purpose in many cases if applied by itself, but it is better to use it as mentioned, or mix ashes with it. Lime is also useful in ridding it of acids, noxious to vegetation, which it sometimes contains. (Get Dr. Dana's "Muck Manual.")

Substitute for White lead.—P. (Uniontown, Pa.) From experience, we are unable to say what recipe would prove best, but prefer the following to any we at present recollect:

Take one bushel of unslacked lime, and slack it with cold water; when slacked add to it 20 lbs. of Spanish whiting, 17 lbs. of salt, and 12 lbs. of sugar. Strain this mixture through a wire sieve, and it will be fit for use, after reducing with cold water. This is intended for the outside of buildings, or where it is exposed to the weather. Two coats should be laid on wood, and three on brick. A whitewash brush may be used for laying it on, and each coat must be dried before the next is applied. This may be made any color you please. For straw color, instead of the whiting use yellow ochre; for lemon color, ochre and chrome yellow; for lead or slate color, lampblack; for blue, indigo; or green, chrome green.

Machine for loading stones.—G. B. (Frederick Co., Md.,) wishes to learn whether there is in use a simple, cheaply constructed machine, suitable for loading stones of four or five hundred weight, that one or two hands could work.

Lawrence's Lever Buckle.—The depot for the sale of this article is Cornell & Brothers, 269 Pearl-street, New-York.

The Poppy—Opium.—A Subscriber, (Petersville, Md.) We are unable to say how many pots of opium can be produced per acre. The somniferous poppy may be readily grown in this latitude—indeed several varieties of it are common in flower-gardens—but the narcotic juice which it affords, is said to be much less potent than that produced in hotter countries. We do not know whether it could be profitably cultivated in the latitude of Maryland.

Injury to an Ox's eye.—A. L. (St. Joseph, Mich.) Treat the eye as you would your own, if it had received the same injury. If a film grows over it, some fine table-salt blown in through a quill, will probably take it off.

Sweet Scented Clover.—A. L. It is not worth much for fodder.

Seed Sower.—J. F. A. (Zanesville, O.) The price of Seward's machine, (mentioned in the April number) is $10. It would sow mustard well. There are several other machines, varying in price. The Boston agricultural warehouses would be likely to furnish an assortment of such articles. Lewis' machine is highly recommended, and is undoubtedly one of the best. It is for sale in Boston.

Silk Culture.—"A Subscriber." We know of no "*periodical*" at present published on this subject. If a *treatise* is what is wanted, a copy of Whitmarsh's Manual can be had at this office.

Seeds of the Larch.—J. S. (Van Buren, N. Y) We suppose it is the seed of the Scotch Larch that is wanted. They could not be had in any considerable quantity without importing them. The best way would probably be to import the young trees from Scotland. We cannot say what they would cost. If any one in this country has them for sale, they would do well to inform us.

"Mowing Machine."—J. S. (Prospect Hall.) The machines used for cutting wheat are commonly called harvesting machines. We are not aware of any reason why they may not cut oats as well as wheat.

Woad.—J. D. F. (Schuyler, N. Y.) As it is too late for any information in regard to *culture* to be useful this season, we only give from the "Flemish Husbandry" some remarks on curing. The leaves begin to be fit for gathering when they turn down, and turn slightly yellow. A dry time is necessary for gathering, which is repeated three or four times as the leaves arrive at the proper state of maturity. If any dust adhere to the leaves they should be slightly washed, and set to dry in the sun. They are the better for a slight drying before they are carried to the mill. They should never be heaped in the fresh state so as to excite the least fermentation. They are ground into a paste in a mill constructed like an oil mill. The paste is well pressed with the hands and feet under a shed, and made into one or more heaps, of which the surface is made smooth. There it heats, and a hard crust is formed on the surface, which must not be broken on any account; all cracks in it are immediately stopped with some paste. In a fortnight the fermentation is completed, which is known by the cessation of the strong ammoniacal smell, diffused during the time of its continuance. The mass is then broken up, and the crust is well mixed with the interior parts. The whole is formed by the hands into balls of about one pound weight each, and then pressed into oblong moulds and formed into cakes like small bricks. These being carefully dried are fit for sale.

Charlock, or Wild Mustard.—A. E. (Cicero, N. Y.,) wishes to know the best mode of eradicating this plant. His course so far has been to pull up every stalk as soon as it appears. Is there a better or more economical way ?

CONDENSED CORRESPONDENCE.

Improved Farming.—"**Experiment**," Easton, Talbot county, Maryland, informs us that in 1840, he bought a farm of 200 acres, of what was considered worn-out land. The year before he bought it, it was cultivated by a man who was thought a good farmer, and its produce was 410 bushels of corn, 31 bushels of wheat, and 115 bushels of oats, "all told, and no hay nor pasturage." Its present produce is stated at 1,200 bushels corn, 100 bushels wheat, and 800 bushels oats; which crops at a fair cash valuation, would give an income over the year 1839, of $515.10. In addition to the above crops, there have been raised for the two last years, from 300 to 500 bushels of potatoes each year, as well as from 200 to 300 bushels of turneps and beets, with such other vegetables as are commonly cultivated in a garden, and from five to ten tons of good hay." The stock kept is one saddle and carriage-horse, two work horses, one mule, fifteen head of cattle, (on an average,) and from four to six hogs, the latter confined in pens, and kept constantly in the manufacture of compost from leaves, straw, earth from the woods, muck, &c. As much manure is also made from the cattle and horses as is practicable, by providing materials for absorbing the urine, &c., all which is applied to the land. The writer states that he gave $1120 for his farm, which was considered very high. In regard to the expense of management, he says—"I keep two men; one of which runs the cart nearly all the year, hauling wood, hay, manure, and materials for making it, going to mill, &c.; the other performs the farm-work, with such help as he gets from the carter. For these two hands I pay $110 a year, including clothes, &c."

Culture of potatoes—Drouth in Virginia.—Mr. H. R. **Robey**, Hopewell, Va., states that he has been successful by cultivating potatoes by the following mode. He breaks up a piece of sward land in the fall or spring, and about the 20th of June re-plows it. Lays off the rows four feet apart, and plants the pieces of potatoes a foot in the row. He states that he has found no difference in planting large or small potatoes, either in quantity or quality, and he prefers cutting up small, as he thinks one good eye better than two or more. When the tops are about six or eight inches high, he runs the plow close to the potatoes and throws the earth away, and then turns the earth immediately back, and follows with the hoes. This is all the working they get. We think common experience does not agree with Mr. Robey's remarks about the product of small potatoes, and cutting potatoes for planting very small.

Mr. Robey states that the potatoe crop in his neighborhood this season must be small, even with a good season, for the farmers could not get seed to plant. Potatoe rot has not made its appearance in that section. The drouth, Mr. R. says, "has been truly distressing. The corn crop cannot be more than one-third the usual yield—the oat crop very small. Wheat has done well both in quantity and quality."

Black-leg in Calves.—E. **Hammond**, Conesville, says in regard to this disease—"Be as careful of your calves as though they were made of flesh and blood. Give them therefore a dry stable or house to winter in, and instead of giving them an ounce of salt-petre once in three weeks, just give them a good tea-spoonful once a week. But mind and keep their feet dry—this is the grand secret. They need good water too, as often as do your horses—see that they have it."

Culture of Potatoes.—S. **Widney**, Piqua, O., informs us that he successfully cultivates potatoes on the following plan. Plant in hills, and when the potatoes are about an inch out of the ground, take a light plow and run it so close to them as to cover them lightly with earth. When they get through this an inch or so, cross-plow them, covering up as before. This mode is stated to be equal to the best hoeing, besides being a great saving of labor. Mr. W. states that he has practiced this mode for several years, and has never lost a hill, or had them at all injured by covering.

Agricultural Societies and papers.—Mr. Widney informs us that an Agricultural Society was organized in Miami county last year, that a fair was held at which a large concourse of farmers attended, bringing a respectable amount of good stock, &c., that the funds and general concerns of the society are in good condition, and that there is every prospect of success. Speaking of the advantages of agricultural papers, Mr. Widney says—"By reading the Cultivator for the last eight years, I have derived a cash profit of at least *fifty dollars per year*, in the way of improved cultivation and farming economy generally."

Saltpetre for Beef—Cotton Beds.—**Alexander Leeds**, Esq., St. Joseph, Michigan, writes us—"In curing my beef last fall, I used saleratus in place of saltpetre, and I never had better beef.

"You spoke of "cotton beds" in your Dec. No., '44. I have been using them in my family for several years, made of 'batting.' In summer they are cool and comfortable, and in winter equal to any feather bed. They are made like matresses, sewed through and through at every six or eight inches."

To cure the Scours in Horses.—Dissolve a piece of opium as large as a common sized chestnut in one pint of brandy, and pour it down from a bottle at one dose. I have given it, and ordered it in a number of cases and never knew it to fail to effect a final cure. Laudanum will answer the same purpose, if you can ascertain its strength so as to know how much to give. R. **Burrit.**

Good Sheep.—Mr. **Reed Burritt**, of Burdett, N. Y., informs us that he has a flock of 242 sheep, which yielded on the average, at the last shearing "a fraction over four lbs. two oz. per head—well washed on the sheep's back. One wether gave seven lbs. fourteen oz., one ewe seven lbs. seven oz." Two bucks, one a yearling and the other a two-year-old, purchased of Mr. R. A. Avery, of Galway, N. Y., gave eight lbs. five oz., (the oldest,) and six lbs. three oz., (the youngest.)

Mr. Burritt has 14 ewes and two young bucks which he purchased of S. W. Jewett, of Vt. One of the bucks is two years old, and the other is a yearling. The two-year-old was not sheared; the yearling's fleece weighed seven lbs. fourteen ounces, "well washed on his back." Mr. B. has also 13 ewes and a yearling buck which he purchased of John T. Rich, of Shoreham, Vt. [He refers to the Cultivator for 1844, page 378 for pedigrees of Mr. Rich's sheep.] The two lots were mostly one and two years old. "Messrs. Jewett & Rich," says Mr. Burritt, "thought they would average five lbs. of wool per head; but they came a little short of that as might have been expected, considering they came a long and tedious journey in the month of April, and were sheared fifteen days earlier than any of them were last year." Mr. Burrit gives his sheep through the winter, half a gill of corn or a gill of oats per head, daily, and feeds them with straw at noon, and hay morning and evening; having good sheds, which are carefully kept dry and clean by littering with straw as often as is necessary.

In a subsequent letter from Mr. Burritt, we have received samples of his wool, which can be seen at this office. He states that he paid for the 30 sheep he bought in Vermont, $660—that it cost $90 to get them home, making the whole cost $750.

Large Fleeces.—Mr. A. L. Bingham of Cornwall, Vt., writes us as follows:—"I notice in the last number of the Cultivator, a stump against the whole world. It is a very difficult matter to find a flock of sheep that will supersede every thing else, without finding something that will match them; consequently I am inclined to give you the result of the shearing of my sheep. In looking over my minutes, I find it to stand as follows: 48 paular merino ewes, with lambs by their sides, and two rams, averaged me 6 pounds 2¼ ounces of well washed wool per head. One buck, the Vermont Hero, 12 pounds 7 ounces—the other, the American Tiger, three years old, 12 pounds 10 ounces—one ewe sheared 9 pounds—four others between 8 and 9 pounds—the remainder between 4 and 7 pounds per head. Fifty-two yearling ewes, including two rams, averaged 6 pounds 3¼ ounces—one yearling buck 8 pounds 14 ounces—another 8 pounds 9 ounces. Sixty Gaudaloupe breeding ewes averaged me a fraction less. I should like to know how many Mr. Randall took his averages from, whether they were all breeding ewes or yearlings, and how much the average was in pounds and ounces. Will he give us the result, so that we can see how we stand? So I would say old Cornwall against the world."

Heavy Fleece.—Mr. Buel Warner, of Cornwall, Vermont, writes, that having seen in our last, an account of the fleeces yielded by Mr. Randall's sheep, and noticing that Cortland "offers against the world," he was induced to send us the weight of a yearling buck of his, own brother to Mr. R.'s heavy fleeced one. Mr. Warner states that his sheep was yeaned the first week in April, 1844, and was sheared the 23d of June last. The fleece weighed 9 lbs 5 ounces, well washed and in good condition. This, he says, is over a pound more than Mr. R.'s gave at the first shearing. Accompanying this account, was a sample of the wool. It is clean, and of remarkable quality for such weight. The weight of the sheep is 116 pounds. He, as well as Mr. R.'s buck, were by Mr. Jewett's *Fortune*. Mr. Warner also states that Mr. Jewett sold last year, a March lamb to Mr. Foot, a neighbor of Mr. W.'s, which sheared on the 20th of June last, 11 pounds of wool.

Editor of the Cultivator—Will you permit one of your Boston subscribers to make a suggestion to the dairyman of New-York, Vermont, &c. For several years past, I have noticed that butter, which was perfectly sweet at the time it was purchased, has acquired towards the latter part of the season, (say March to May,) a *bitterish* taste in the outer portion of the mass, which rendered it totally unfit for the table. As this was entirely different from the *rancid* taste incident to badly made butter, I have attributed it to some quality inherent in the wood of which the firkins were made, probably owing to the circumstance of its being wrought in a *green* state. If this be the case, I should think it very desirable that those farmers who are in the habit of packing butter for distant markets, should procure for that purpose only such vessels as are made of properly seasoned wood. C.

Mr. Editor—I have pursued an effectual method of exterminating burdocks. I leave them to grow until warm weather is fully set in, and the plants filled with sap. I prefer leaving the middle stalk set, but am careful to take them previous to budding. With a strong spade I cut the roots two or three inches under the surface, drawing the spade directly back without removing the earth, plucking the top part up with my hand, and stamping the earth firmly over the remaining part to prevent a free circulation of air; and few of them will sprout. Such as do, will be only a weak and sickly progeny, and a repeated application of the spade will prove a cheap and successful exterminator. S. N. H.

FIRE-BLIGHT.

The opinion that fire-blight in the pear tree is frequently if not usually caused by the influence of frost on the imperfectly ripened wood, is now very generally adopted, and some interesting cases in corroboration have occurred the present summer.

"We have had no frost so severe as this," observes D. Thomas, in the Ohio Cultivator, "and as late in the season, since the year 1817. It has given us a new chapter in the history of fire-blight." * * "It has produced ten times more fire-blight than I ever saw before. It was not confined to the *pear* tree, though that suffered most; but the *apple* tree and the *quince* tree share largely in the calamity; and even the *cherry* tree, which was not on the list of such as were susceptible of this malady, did not escape."

The new shoots of fruit trees, being young, fresh, and succulent, were peculiarly susceptible of injury by frost, which operated on them with as great facility as the frost of winter operates upon the young shoots which grow late in summer or in autumn, producing blight in the ordinary way. Most of these young spring shoots escaped; a portion were killed at once by the frost; and another portion, a large one, though not killed immediately, were so affected as to cause a diseased action in the sap, or a poisonous fermentation, which after a time resulted in the death of the branch or tree.

That the fire-blight thus resulting, was not the effect of the cold of *last winter*, was conclusively shown by the fact that no appearance of the disease was seen before the frost; but immediately after the frost, it was observed to be taking place all through the country; and from that period to the present time, which is near the latter part of summer, new cases have been continually taking place. A *Stevens* pear tree showed no indications of the disaster until operated on by the intense heat of the present midsummer, and a young Bartlett was seen the present week to be suffering from the first stages of the malady, in one of its limbs. A Florence cherry tree died a few weeks only after the frost. In no case has the most rigid examination detected the slightest indication of the presence of an insect or of his ravages.

The great variation in appearance, and the irregular manner of attack, are worthy of notice. In some cases, the malady appeared to be simple death or cessation of growth, the leaves gradually withering, without that sudden change to a black color which shows the presence of poisonous sap in the branches, produced by freezing and partial decomposition. In other cases the latter symptoms were fully developed. Again, in some cases, single or small twigs only were destroyed on the tree; in others, large limbs or large portions of the bark were affected.

NOTICES OF NEW PUBLICATIONS.

New work on Sheep.—"The American Shepherd," by L. A. Morrell, Esq., of Lake Ridge, Tompkins county, N. Y., will soon be issued by Messrs. Harpers. From our knowledge of Mr. Morrell, and from having read a considerable portion of the work, we have no hesitation in saying it will possess a practical character which cannot fail to render it highly valuable to sheep-owners in all parts of the country. Previous to its going to press, the work was submitted to the examina-of the Executive Board of the New-York State Agricultural Society, by whom it was recommended in the following language:—"The committee have great pleasure in recommending the work to the attention of wool growers and others interested in the breeding and management of sheep, as one containing a large amount of practical and scientific information on a most important branch of American agriculture." We are authorized to state that an opportunity will be presented at the coming State Fair at Utica, for procuring copies of Mr. Morrell's book. It will be recollected that Mr. M. offered a premium for the best plan of a sheep-barn. He requests us to state that the first premium was awarded to M. Y. Tilden, of New Lebanon, Columbia co.; the second to Richard Morgan, of Aurora, Cayuga co., and the third to Dr. Chapin, of Providence, R. I.

FOREIGN.

We have English papers to the 2d of August. The grain harvest will be late, owing to the want of sufficiently warm weather. Should the weather have proved favorable through the last month, a full average supply of wheat will be gathered in most parts of the kingdom. Barley is good, excepting its having been injured in some sections by lodging. Very large growths are expected of oats, beans, and peas. Hay is abundant.

The Exhibition of the Royal Agricultural Society at Shrewsbury took place from the 12th to the 18th of July. The show of stock was considered upon the whole highly satisfactory, and fully answering the purposes intended by the society.

At the auction sale which took place after the show, several Short Horn bulls sold at from 40 to 59 guineas each; and Hereford bulls at 40 to 50 guineas, and one for 99 guineas. South Down bucks sold for £11 to £15 each. Pigs, £7 each.

The exhibition of implements is said to have been far short of what has been seen at previous meetings of the society.

The society continues to increase in numbers and wealth. Its present list of members is nearly 9,000, and its funded property above £9,000.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, August 22, 1845.

COTTON.—But little has been done in the staple. At Savannah, sales were made of 100 bales, 6a7½ cts. At N. Orleans, 13 bales good new at 8 cts.

BUTTER.—Western, 12a15—Goshen, 16a20.

CHEESE—6a6½.

FLOUR—Genesee, from new wheat, $4.62½—Ohio, $4.43a$4.50.

GRAIN—Wheat, nothing doing—no new crop in market.

HEMP—Dew rotted, per ton, $68a$70—water rotted, $90a$110

HOPS—per lb. 13a14 cents.

HAMS—scarce and firm at 7¼a7½ cts.

BEEF—Mess, $9a$9.75.

LARD—8a8½.

PORK—new mess $13.87½—prime, $10.75a$10.87½.

TOBACCO—Kentucky, per lb. 3 cents—Connecticut seed leaf, 8a10.

WOOL—(Boston prices) Aug. 23:

Prime or Saxony fleeces, washed per lb.......	$0.37a0.40
American full blood fleeces,.................	35a0.37
" three-fourths blood fleeces,........	33a0.35
" half blood do	31a0.32
" one-fourth blood and common,....	28a0.30

NOTICE.

THE undersigned is happy to give notice that the added improvements this season by the subscriber to the "Warren's Improved Patent Horse Power and Thresher," have secured increasing success and satisfaction to all, as was confidently anticipated. The public can now be fully satisfied that these machines are superior in all respects to any others for their low price.

Two Horse Power and Thresher together, only $75.

These Machines are made and sold in this city only by the sole agent,

JAS. PLANT,
Successor to L. Bostwick & Co., 5 Burling slip, N. Y. City.

SHORT HORN DURHAMS FOR SALE.

9 HEAD of this valuable breed of animals are now offered for sale by the subscriber, having more than he can well keep on his farm, viz: Rose, 9 years old, a good milker, having given 25 quarts per day, on pasture only. She is in calf by my prize bull Meteor, and will drop her calf about the middle of August. Empress, nearly as good a milker as Rose. She dropped her calf about a month ago, and will be bulled by Meteor. Eunice, 5 years old, white, bulled by my imported bull Duke of Wellington, 25th of June, a good milker; her dam has given 32 quarts of milk a day on pasture only. Julia, four-year-old heifer, recently bulled by Meteor. Lily, two-year-old-heifer, white, bulled by Meteor, 9th of June, and three yearling heifers, roan, red, and white, got by Wellington and Meteor. A yearling bull, got by Meteor, out of a cow bred by Charles H Hall, Esq., of Harlem. The Cows above named were bred by the Bullocks, of Albany county, and their descendants. This stock has the reputation of being good milkers. Gentlemen desirous of procuring the blood of the celebrated herd of Thomas Bates, Esq., of Yorkshire, can do so, with a cross of the Bullock stock, as the sires of the young animals are from that gentleman's herd, and the cows are in calf by the same bulls. This strain of blood can hardly fail to make good milkers. Letters, post paid, will receive an answer. The animals will be sold from $100 to $125 a head. A credit from 6 to 12 months will be given for approved paper. GEO. VAIL.

Troy, July 25, 1845—2t.

PORTABLE MILLS.

THE undersigned would again call attention to the Patent Portable Burr Stone Mills, for which he is sole agent in this city. Prices at retail, for 12, 15, 18, and 24 inch, $35. $55, $85, $100.

These are very useful for a dry season, and where horse or steam power may be used. One-third power is saved by their peculiar construction, while their extra speed causes very rapid grinding.

J. PLANT, 5 Burling slip, N. Y. City.

SALE OF DEVON CATTLE.

E. P. BECK will sell at public sale, on Wednesday, the 15th of October next, at his dwelling, in Sheldon, Wyoming Co., N. Y., a large portion of his valuable stock of pure Devon cattle, consisting of calves, yearlings, &c , steers, heifers, cows and bulls, of various ages. One year's credit will be given on approved credit to all who wish it.

Sheldon, August 20th, 1845.

SANDFORD'S PATENT STRAW AND HAY CUTTER.

THE subscriber is made sole agent in this city for the sale of this most valuable machine It is deemed superior to any others heretofore offered to the public. Its construction is such as to cut very rapidly and fine, and the knives are easily kept in order. Retail price, only $15. J. PLANT, 5 Burling-slip, N. Y city.

G. W. RYCKMAN,

INSPECTOR OF HOPS, No. 50 Water-street, between Old and Coenties-slip, New-York.—The subscriber has completed a regular correspondence in England, Germany, France, and throughout this country, in relation to the growth, and quantity of Hops raised, and the probable demand and prices for AMERICAN HOPS, both at home and in Europe. His sources of correct information are not surpassed by any other individual engaged in the business, and from his many years experience, he knows that he will be enabled to give the most entire satisfaction. He gives his personal attention to the sale of all Hops consigned to him.

☞ Advances made on all produce consigned to him for sale.

New-York, Aug. 20, 1845.—1t.

FRUIT TREES.

THE subscribers are now ready to receive orders for *superior Fruit Trees*, viz: APPLES, PLUMS, PEARS, CHERRIES, PEACHES, Quinces, &c., &c., from *their new and extensive nursery*, Their assortment, which they offer for sale the coming fall, is very large and fine. The trees are handsome, thrifty, and of the most suitable size and age for transplanting, and being propagated by the proprietors themselves with the most scrupulous care, either from bearing trees in their own grounds, or from others of undoubted genuineness, and being in every other respect until they are sent from the *nursery*, under their *immediate personal supervision*, they can be confidently recommended.

It is expected that all orders coming from persons unknown to the proprietors, will be accompanied by a remittance, or that some responsible reference will be given. Orders are entered on the order book, to be forwarded as soon as practicable in the fall. Orders respectfully solicitied, and will receive prompt attention.

WILSON, THORBURN & TELLER, or
WM. THORBURN, Seedsman, 38 Broadway,

Albany, Sept. 1—3t.

☞ A liberal discount made to those who purchase to sell again, or by wholesale.

NEW AND IMPROVED POUDRETTE,

MADE by the Lodi Manufacturing Co., may be had by application at the office of the Company, No. 51 Liberty-street, New-York, or by addressing a letter (post paid) with directions how to ship, &c., to "The Lodi Manufacturing Co., New-York." The price for it, delivered anywhere in New-York city, free of cartage, &c., is as follows: For one barrel, $2.00; for two bbls., $3.50; for three barrels, $5.00; four barrels, $6.68; five barrels, $8.00; six barrels, $9.75; and for any quantity over six barrels, $1.50 per barrel. Pamphlets and instructions for its use, may be obtained gratis at our office.

The Lodi Manufacturing Co., defy competition in the art of making a *cheap*, *powerful*, and *lasting* manure, and strenuously invite a fair trial between *an equal cost* of their poudrette, and an equal cost of the best guano in existence.

It is hoped that the successful trial of poudrette upon wheat, on Long Island, the last season, will encourage many others in other parts of the country, to make a trial of its effects this season. Quantity per acre for wheat is 10 barrels, or 40 bushels, sown broadcast with the seed, and harrowed in.

Sept. 1—2t.

SOMETHING NEW—IMPORTANT TO SMALL FARMERS.

THE undersigned has completed a Threshing Machine for hand power, one of which may be seen at his ware-rooms. It is ascertained that a man and boy can readily thresh 5 bushels per hour clean, and the straw be saved so as to be bundled and fitted for market.

More than one quality will probably be made, and the prices vary from $25 to $50 each. Fixed prices will be established hereafter. All orders (post paid) will be now attended to, and cash orders promptly supplied.

J. PLANT,
5 Burling slip, N. Y City.

AGRICULTURAL MACHINES, &c.

NOW in store for sale, Best Premium Fanning Mills, Straw Cutters, Portable Stone Mills, Plows, &c.,.&c Orders will be attended to promptly by J. PLANT, 5 Burling-slip, N. Y. city.

FAN MILL AND CRADLE MANUFACTORY.

THE subscribers continue to manufacture Fan Mills and Grain Cradles of the very best quality. The subscribers have recently improved their Fan Mills, so that wheat and all other kinds of grain and seeds are thoroughly cleaned by being run through the mill once. Said improvement has been secured by letters patent, bearing date the 10th day of July, 1845.

Notwithstanding the labor and expense which we have bestowed upon the improvement of our Fan-Mills, we are enabled to furnish the "Patent Fan-Mills" at the same prices which we have received for mills heretofore manufactured by us.

We manufacture four different sizes of Fan-Mills, seven sieves to each mill. Prices from $21 to $27. according to size.

Orders from abroad promptly filled, and a liberal discount to dealers.

I. T. GRANT,
D. H. VIALL.

Schaghticoke, Junction P. O., Rensselaer Co, N. Y.

We the subscribers certify that we have witnessed the operation of I. T. Grant & Co.'s "Patent Fan-Mill," upon wheat and all kinds of grain and seeds, and have no hesitation in pronouncing it superior to any mill now in use. The operation of cleaning wheat is performed with one-half the time and labor required by other mills, as it chaffs and screens at the same time. All kinds of grain and seeds are thoroughly cleaned by being run through the mill once. We cheerfully recommend, and advise all farmers who wish to purchase a fan-mill, to purchase the "Patent Fan-Mill" manufactured by I. T. Grant & Co.

John M. Mott, H. K. Duer,
L. D. Eddy, John Case,
Cha's J. Wilber, Henry P. Stuntz,
James H Rice, Philip H. Stuntz,
Moses Buckley, Edwin Smith,
P. G Williman, James G. Gordon,
Calvin Morse, George W. Corry,
James H. Jones, Francis Crocker,
Wm. B. Gordon.

I know little of the utility of the fan-mill above described except from information. I am, however, personally acquainted with almost every one of the above subscribers, and have no hesitation in saying that the most implicit confidence may be reposed in all they certify.

JOB PIERSON.

I am intimately acquainted with the Hon. Job Pierson, who has signed the above certificate. He is a highly respectable man, (formerly member of Congress,) and I have great confidence in him.

W. L. MARCY.

For sale at WARREN'S, in Troy, WM. THORBURN'S, Albany, and D. L. CLAWSON'S, 192 Water-street, New-York.

WILLIAM HOVEY'S PATENT STRAW CUTTER.

THE subscriber having made some important improvements in his tools and machinery for building his celebrated Straw Cutter, is now able to offer them at the following reduced prices:—

No. 1, $10, former price $12.
No. 2, $12, " " $15.
No. 3, $15, " " $20.
No. 4, $20, " " $25.
No. 5, $25, " " $30.
No. 6, $30, " " $35.

A liberal discount will be made to dealers. The great advantage that these machines have over all other Cylinder Cutters, consists principally in the ease and facility with which the knives can be adjusted, for which he holds letters patent. Any one knife may be taken off and ground without taking off the whole number; and should any one knife become narrow by grinding, the edge can be set out by set screws, so as to come in equal contact with the hide roller, without the necessity of grinding all the other knives down to the same width. The wings to which the knives are fastened are of vast importance, as they serve to strengthen and support the knives, and prevent them bending while cutting cornstalks or other coarse fodder.

Machines will probably be offered by others in the market, made to resemble these Cutters, but entirely without the above named improvements. The knives are fastened on a cylinder without wings to support them, and are confined by rings on each end. No one knife can be taken off without the whole number—and in case of inequality in the width of knives, the machinery becomes useless unless they are all ground equal, as there are no means of setting out the edges to make them cylindrical, and it will be extremely difficult to grind them so perfect that they will all come witth equal contact on the roller on which they are designed to cut. Should such an imperfect article be wanted on account of cheapness, the subscriber will furnish a better one at a cheaper rate.

CAUTION.—Any person who shall make, use, or sell to others to be used, any of the above improved Cutters, will be held accountable for the infringement of the above named patent.

Worcester, Mass., August, 1845. WILLIAM HOVEY.

N. B. Ruggles, Nourse & Mason, having ceased to act as my agents, a full assortment will be kept for sale at the Farm Implement and Seed Warehouse of D. PROUTY & CO, Nos. 19, 20, and 22 North Market-street, and 19 Clinton-street, Boston. They are also for sale in Albany. Inquire at the Cultivator office.

Sep'. 1—3t.

FARM FOR SALE.

THE subscriber offers for sale the farm upon which he now resides, situate in the village of Auburn, in the county o Cayuga, and containing 100½ acres.

This farm lies upon the south side of the western turnpike, (now Genesee-st., Auburn,) and is well known as having been the residence of Hon. Nathaniel Garrow, deceased, for many years.

The buildings, fences and other erections thereon, are ample and in good repair; the soil will vie with that of any other farm in Western New-York, for fertility, variety and earliness of vegetation. Great attention has been paid as well by the former as also by the present owner, to the selection and cultivation of choice fruit, and there is now upon the farm, in full bearing, a great abundance of the best varieties of apples, pears, cherries, peaches, grapes, &c. &c. The farm is well watered, durable springs, which give a never failing and ample supply.

The location is believed to be as desirable as that of any other arm in the state, as well for farming purposes as also for the residence of the gentleman or a man of business, being withing a few minutes walk from the Rail Road Depot, and within a few rods of the Female Seminary.

A credit will be given, if desired, for a large portion of the purchase money, for a term of years upon payment of interest annually. Inquiries may be made of the subscriber upon the premises, of Luther Tucker, Esq., Editor Cultivator, Albany, or of David Wright, Esq, Auburn.

JOHN REMER.

Auburn, N. Y., July 14, 1845.—3t.

A LAKE FARM FOR SALE.

THE subscriber offers for sale the Farm owned by Hon. Jedediah Morgan at the time of his death, situate on the east side of, and adjoining, the Cayuga Lake, about two miles south of the village of Aurora, in the town of Ledyard, (formerly Scipio,) containing about 360 acres, with a good porportion ot Timber Land, on which he oak and hickory predominate. The road leading from Auburn, to Ithaca, via Aurora, passes through the Farm, dividing it into two nearly equal parts.

The land is of an excellent quality, as well for wheat and other grain as also for grass.

The situation and location is believed to be as eligible, and to combine as may advantages, as any other farm in the county. The first point of land which makes into the Cayuga Lake, above the village of Aurora, is a part of the farm.

A large proportion of the purchase money can remain, secured by bond and mortgage, upon annual interest. Any person wishing to view the farm, can do so by applying to C. C. WHITE, the tenant upon the premises. The whole will be sold together, or in parcels, to suit purchasers. Letters of inquiry addressed to the subscriber, *post paid*, will be promptly answered.

DAVID WRIGHT,
Trustee of the Estate of Jed'h Morgan, dec'd

Auburn, July 14, 1845.—August 1—3t.

FARM FOR SALE.

IT consists of two lots, situated on opposite sides of the Albany and Schenectady turnpike, four miles from Albany. The lot on the north of the road, comprises forty, and that on the south, sixty acres. Both are enclosed by a good fence of boards with chestnut posts, erected a little more than a year ago. The lot on the south side has a small house, a stable with shed, and a good yard for manure, or stock. It is also provided with a well of excellent water: There are permanent streams of water on both lots. The stream called the Patroon's brook runs across the whole width of the south lot. With the exception of about a third of an acre on the north lot, both have been entirely cleared, drained where necessary, thoroughly plowed, seeded last year with clover and grasses, and will yield this season nearly or quite an average of two tons of hay to the acre. The two lots are suitable either for one farm or two farms, but will be sold together or separately, to suit purchasers. The natural position, as well as the soil of both lots is good, and cannot fail to give satisfaction. Every thing considered, a more desirable situation could scarcely be found in this vicinity.

For particulars, inquire at this office, or of JOHN McCARDELL, corner of Nassau and Pine-streets, New-York. July 1—3t.

LINNÆAN BOTANIC GARDEN AND NURSERY,

Late Prince's, Flushing, L. I., near New-York.

THE new proprietors of this ancient and celebrated Nursery, late of William Prince deceased, and exclusively designated by the above title for nearly fifty years, offer for sale, *at reduced prices*, a more extensive variety of FRUIT AND ORNAMENTAL TREES, Shrubs, Vines, Plants, &c., than can be found in any Nursery in the United States, and the *genuineness* of which may be depended upon; and they will unremittingly endeavor to merit the Confidence and Patronage of the Public, by Integrity and Liberality in dealing, and Moderaton in charges.

Descriptive Catalogues, with *directions* for *planting* and *culture*, furnished *gratis* on application to the *New Proprietors*, by mail, *post-paid*, and *Orders* promptly executed.

WINTER & Co.,
Proprietors.

Flushing, L. I, August 1, 1845.—2t*

SEED STORE AND AGRICULTURAL WARE-HOUSE.

OUR Spring supply of seeds is now ready, and we shall be happy to receive orders for Field or Garden Seeds, of every description, Black Sea, Italian and Siberian Spring Wheat, Barley, Peas, Clover Seed, Timothy Seed, Seed Corn, Shaker and other Garden seeds, &c. Also, a full assortment of farming tools selected from the best manufacturers in the country. Hoes, Scythes, Forks, &c. cheap by the dozen.

E. COMSTOCK.

Rome, Oneida county, March 1, 1845.

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☞ **ADVERTISEMENTS inserted in the Cultivator, at $1,00 per 100 words for each insertion.**

AYRSHIRES.

FOR sale an imported Ayrshire Bull, two imported Ayrshire Cows, and four young Bulls, from 2 years to six months old. The above are offered for sale to close an estate, and are of unquestioned excellence, as will be ascertained on application (post paid) to

MARK H. NEWMAN, 199 Broadway, New-York.

Sept. 1—1t.

STRAWBERRY PLANTS.

J. M. THORBURN & Co., 15 John-street, New-York, and Astoria, (L. I.,) beg to inform the horticultural public that they have now ready for delivery, 5000 *Myatt's Eliza* Strawberry plants, which they have proved by putting in beds for two seasons past, and can with confidence recommend this excellent strawberry to the most limited grower. In England, where it originated, it maintains to this day its celebrity, and in Covent Garden Market, London, yields to no other sort but the British Queen, which the Eliza is the parent of. It is of fine flavor, and cockscomb form, bright red color, and erect habit. Price for strong rooted plants in pots, 75 cents per dozen; out of pots, from the bed, $3.00 per hundred. Also, *Myatt's British Queen*, unrivalled for every excellent property, has fruited splendidly in a large bed the present season, and is indispensable to the smallest cultivator. No new sort in England yet equals it for general good properties, nor in this country approaches it. Strong rooted plants, in pots, $1.00 per dozen; and from the bed, strong plants, $6.00 per hundred. *Prince Albert*, very large and fine, great bearer, fine shape, and beautiful color. $1.00 per dozen; 5.00 per hundred. It is one of the best sorts for forcing in pots. Also *Hovey's Seedling*, a well known good sort—$1.50 per hundred, $5.00 per thousand. *Ross Phœnix*, one of the best American varieties, well known around Hudson and Albany, as a fine productive kind; $1.50 per hundred, $5.00 per thousand. *Scotch Pine Apple*, a very bright oblong fruit, of a sprightly pine apple flavor; $1.50 per hundred—$5.00 per thousand.

The above are quoted at prices which will encourage any one to plant a good sized bed at once. They will produce moderately next spring and abundantly hereafter. Strawberries to bear fruit in perfection, should be kept clear of runners, which can be used for forming new beds. A covering of three inches of stable manure, in winter, is very serviceable, which *fork in* early in the spring. Keep clear of weeds, and a good crop will follow—place the plants eighteen inches apart in the rows, and an alley of two feet between the rows.

Orders will meet prompt despatch and careful packing and forwarding.

Sept. 1—1t.

NEW-YORK AGRICULTURAL WAREHOUSE.

HAVING taken the commodious store, No. 187 Water-street, the subscriber is now opening the largest and most complete assortment of Agricultural implements, of all kinds, ever yet offered in this market. Most of these are of very highly improved pattern—warranted to be made of the best materials—put together in the strongest manner, of a very superior finish, and offered at the lowest cash prices.

Seeds for the Farmer.

Such as improved Winter and Spring Wheat, Rye, Barley, Oats, Corn, Ruta Baga, Turnep, Cabbage, Beet, Carrot, Parsnep, Clover, and Grass seeds, improved varieties of Potatoes, &c., &c.

Fertilizers.

Peruvian and African Guano, Poudrette, Bonedust, Lime, Plaster of Paris, &c.

Fruit, and Ornamental Trees and Shrubs.

Orders taken for these, and executed from a choice of the best nurseries, gardens, and conservatories in the United States.

Horses, Cattle, Sheep, Swine, and Poultry.

Orders executed for stock of all kinds to the best advantage.

Wire Cloths and Sieves.

Different kinds and sizes of these constantly on hand.

The subscriber requests samples sent to him of any new or improved implements, seeds, &c. &c., which if found valuable, extra pains will be taken to bring them before the public.

A. B. ALLEN, 187 Water-st., New-York.

Sept. 1—2t.

STODDARD'S STRAWBERRY.

PERSONS wishing to obtain the Seedling Strawberry noticed in the Cultivator for August last, p. 251. can obtain them by addressing Col. J. S. Stoddard, Palmyra, Wayne Co., N. Y. Price, $5 per 50 plants. They can be sent by Express to any part of the country.

PREMIUM STRAWBERRIES, &c.

WM. R. PRINCE & Co., Flushing, will supply the following varieties of Strawberries, which are superior to any others: Early Garnstone, Prince Albert, Large Early Scarlet, Crimson Cone, Victoria, Bishop's Wick, Myatt's British Queen, Elton, Prolific Hautbois, Southborough, Coul late Scarlet, Swainstone's Scarlet, Prince's Conqueror, Old Pine, Ross Phœnix, Keene's Seedling, Hovey's Seedling, Black Roseberry, Deptford Pine, Boston Pine. Alice Maud. Also the following *second rate*: Myatt's Eliza and Pine, English White and Redwood, and Alpine varieties, and numerous others, including every valuable variety known. Orders not less than $5 or $10, enclosing cash, will meet prompt attention. Catalogues of all trees, plants, &c., will be sent every *post paid* applicant.

WM. R. PRINCE & CO.

Prince's Linnæan Garden and Nurseries, Sept 1.

MACEDON NURSERY.

THE partnership formerly existing between Thomas & Smith, having been dissolved, orders for fruit trees will be received by J. J. THOMAS, Macedon, Wayne Co., N. Y.

A thorough revision of his list of fruits having taken place, and new ground extensively occupied, trees of many varieties can be furnished of only small size before another year.

COMMERCIAL GARDEN AND NURSERY
OF
PARSONS & CO., Flushing, near New-York.

THE proprietors desire to call attention to this extensive establishment which is now probably the largest in the Union, covering an area of over forty acres, and compactly planted with more than 600,000 Trees, Shrubs, Plants, &c.

The very rapidly increasing taste for Horticultural pursuits, producing a demand for new and rare Fruits, Ornamental Trees, and Plants, has rendered necessary a systematized arrangement for the importation of all that is new and desirable.

For this purpose, the proprietors have personally inspected all the principal public and private Horticultural establishments in Britain, France, and Germany, and have perfected arrangements, by which they will receive immediately on its appearance, every thing that is new and valuable.

The trees cultivated at this establishment are straight and thrifty, and from their exposed situation, they are sufficiently hardy for removal to much higher latitudes.

The attention of amateurs and others is particularly directed to the fruit grounds of this establishment, in which will be found bearing specimens of all the varieties of fruit which they cultivate.

Visitors are also invited to inspect their vineries and fruit-houses in which are more than 100 varieties of foreign Grapes, and about 200 varieties of Pears, Plums, Apricots, and Nectarines, all of which will be in bearing in 1846.

Orders may be addressed to the Proprietors at Flushing, New-York, and Catalogues can be obtained by application, post paid, to themselves, or to Parsons & Lawrence, 129 Pearl st., or Saxton & Miles, 205 Broadway, New-York.

VIRGINIA FARMS FOR SALE.

I HAVE for sale several good farms, being portions of the estate called Oak Hill, in Loudon county, Virginia, late the residence of President Monroe. It is about 30 miles from Washington, Alexandria and Georgetown—in a most healthy region, well watered and peculiarly calculated for raising stock of all kinds. To industrious and enterprising applicants, very liberal terms of payment will be given.

S. L. GOUVERNEUR.

Washington, July 1, 1845—july 1—5t.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES

VOL. II. ALBANY, OCTOBER, 1845. No. 10.

THE CULTIVATOR

Is published on the first of each month, at Albany, N. Y., by

LUTHER TUCKER, EDITOR AND PROPRIETOR.

ONE DOLLAR A YEAR.

SEVEN copies for $5—FIFTEEN copies for $10,00—all payments to be made in advance, and free of postage. ☞ All subscriptions to commence with the volume.

OFFICE IN NEW-YORK CITY, AT

M. H. NEWMAN'S BOOKSTORE, No. 199 BROADWAY,

where single numbers, or complete sets of the back volumes, can always be obtained.

☞ "The Cultivator" is subject to newspaper postage only.

Foreign Correspondence.

MR. NORTON'S LETTERS—No. XVI.

Laboratory of Ag. Chem. Association,
Edinburgh, July 31, 1845.

L. TUCKER, Esq.—At the close of my last letter, I had reached Lynn, a town of some commercial importance, near the mouth of the Ouse. After leaving Lynn, our road as far as Boston, lay across a flat, low country, the greater part of which, is but just above the ordinary level of the sea, and some is actually lower, the water being kept out by embankments. Large tracts have in this way been rescued from the sea, and there are men living who have seen boats sailing where luxuriant grain now waves. The soil of this region is of a deep black color and rather stiff, but is very rich, as the crops attested in places where it was well dried. As this implies, a superabundance of water is the great difficulty. The farmers there seem to have but little idea of draining properly. They have their fields divided off by large open drains or ditches, which do the work but very imperfectly. Though the fall is very little on most of the lands, tile drains, rightly made, and at proper intervals, would carry off the water. Where the land is actually below the level of the sea, a hole might be dug in some central point to collect the water, which might then be pumped up by a windmill, and conducted into the sea. This method is extensively practiced in Holland. By a perfect drainage, these lands would become exceedingly valuable, and equal in fertility any in the kingdom. Our next stage, from Boston to Sleaford, was also over a soil capable of yielding immense returns; it lies higher than that near the coast, and is consequently more easily freed from water. Judging from appearances, however, thorough draining is yet confined to a small portion of the farms. Near Sleaford the vegetation was remarkably strong and of a good color. Soon after leaving that place, there was a change for the worse. The soil became light and thin, resting on the öolite formation. Formerly an extensive moor stretched nearly to Lincoln, 20 miles, and so desolate was it, that a lofty pillar was erected on some high ground in the centre, as a landmark for bewildered travellers. This pillar remains, but is no longer surrounded by a barren waste; within sight of it, are now some of the best cultivated farms in Lincolnshire.

We visited the farm of Mr. Frankish, about eight miles from Sleaford, one of the last reclaimed from its natural state. When he took it the whole was a light sandy heath. The soil is still light of course, but wonderfully improved. Clover now grows well there, though he says it is not quite certain to take. His wheat is from five to six quarters per acre. I noticed one wheat stack which was computed to contain 140 quarters, or 1120 bushels. He had two others nearly as large.

The stacks in Scotland are small and round; here they are oblong, and very high and wide. I saw one in the north of Lincolnshire, said to be forty feet in height. They are finished with great nicety, and the wheat will keep for many years, excepting mice and rats in great numbers find their way to it. In some parts of this farm there are but three or four inches of soil above the öolite limestone, which lies in small loose fragments to a depth of perhaps a foot farther. The subsoil plow would be of great use there to deepen the soil, by going down through the fragments of öolite. Their gradual decomposition also would then be of benefit to the soil with which they would be intermixed.

Mr. Frankish's large stock manufactures much barn-yard manure, but beside that he uses very large quantities of rape-dust and bones; he has a mill expressly for grinding these last. He has not yet dissolved them in sulphuric acid. He is trying this year a small quantity of Guano. We found that in this district, rape-dust and bones were almost universally employed. On our way to Lincoln, we looked at one or two other farms that lay about the middle of the old moor. Substantially the same system is pursued on them all. We reached Lincoln on Saturday evening, and on Monday morning resumed our northward progress. In the course of the day we visited six or seven of the best Lincolnshire farms.

We were much pleased at Stannwell's farm, Mr. Russell, about twenty-six miles from Lincoln. This and several adjoining farms, formed, a short time since, an extensive rabbit warren, and was a mere sandy waste when Mr. Russell took it. He has in a few years made wonderful improvements. Upon the very lightest fields, he has carted large quantities of clay and marl, producing thus, good crops where scarce a blade of grass was to be found before. His wheat and turneps were looking particularly well. In the course of our day's journey we passed successively across the upper and lower öolite formations, (the name öolite is given to a peculiar species of limestone,) and finally came upon the chalk of the Lincolnshire wolds. Here we visited during the afternoon, a number of very fine farms, especially deserving of notice, because made from the thin chalk soils of the wolds. We still found a want of subsoiling and draining, but certainly were disposed to yield a very high place to those farmers whom we visited. Guano has been little used there as yet, but bones and rape-dust very largely. The turneps are mostly fed off by sheep; the wheat crops are not often more than 4 or 4½ quarters, 32 to 36 bushels, but the grain is of excellent quality; barley does admirably. We could very profitably have passed many days among these farms, but were obliged to cross the Humber on the following morning.

Our next stop was near Wakefield, at the estate of which our companion, Mr. Breckenridge, was manager. Here we found many evidences of his encouragement tc the improver. The soil is that of the coal measures, generally inclining to clay, and often very stiff. He has induced most of the tenants on the estate to drain their lands, and he told me that the harvest is fully ten days *earlier* in consequence. The subsoil plow is also here in full operation. The pasture fields on the best farms were remarkably fine. On our way to Wakefield, the next afternoon, we saw the farm of our other fellow-traveller, Mr. Johnson. In every respect, it was one of the very best that we had visited. The crops were excellent, and scarcely a weed to be discovered. At Wakefield our little party separated, after a most pleasant and profitable week. I might fill many sheets with details, but fear to weary your patience by anything more than this slight sketch. I am, very truly, yours,

JOHN PITKIN NORTON.

CULTURE OF THE POTATOE IN SCOTLAND.

Featherhall, Midlothian, August, 1845.

To the Editor of the Albany Cultivator :—

I shall now detail to you, the most approved practice, in regard to the cultivation of the different crops, and shall devote this letter to that of potatoes, which may be regarded as the commencement of the rotation in the district in which it is reared.

The land, which the previous season had been under oats, is plowed before the winter frosts set in, with a furrow varying in depth from eight to nine or ten inches. In giving the first furrow for any of the fallow crops, it is considered good practice, to cleave down the ridges, taking care, however, to preserve the original furrows if the land is not thoroughly drained. The advantages of this plan are, the levelling of the field, thus rendering the subsequent cross plowing more perfect and more easily accomplished. It also affords greater facilities for the escape of sudden and severe falls of rain on undrained or retentive soils, and more perfectly exposes all parts of the soil to the action of the frost during winter. The land having been plowed in the manner already described, and that when it is not too much saturated with moisture, the furrows at the headlands and the water courses are cleaned out, so as to prevent any water from lodging.

When the drying winds of March have fairly set in, and the land is relieved of that excess of moisture which usually prevails through the winter, the field is harrowed so as to pulverize the surface, and is then plowed in a direction across the ridges. This furrow is generally eleven or twelve inches in depth, or as deep as the plow will work. It is then harrowed with four or five turns, and rolled if found necessary; after which it again receives a double turn of the harrows, and the root weeds which have been brought to the surface, and freed of adhering soil by the different operations, are carefully collected into heaps by bands of women and boys, and removed from the field. Should these various operations not have rendered the soil clean, or of sufficiently fine tilth, it is either grubbed with Finlayson's harrow, or again plowed, harrowed, and rolled, and the weeds collected as before. If the land has been allowed to become foul, or is of a very stiff nature, it is sometimes plowed a third time, so as to render the soil very fine, and absolutely free from weeds. I have found it an excellent plan in cleaning foul land, to give it (prior to the spring plowing) a turn of the Finlayson barrow to the depth of four inches, then to harrow, roll, and collect the weeds brought up. The advantage of this is, that a considerable portion of the weeds are removed before they are mixed through the large quantity of soil stirred by the deep spring furrow; and that portion too, which being then laid undermost by the plow, is most difficult to be got rid of afterwards. In preparing clay land for green crops, I have tried the following plan with success: As soon as possible in autumn, I plow and otherwise work the land, then open the drills, and allow it to remain in this state till the time of planting. The plow is then passed along the drills, for the purpose of removing any soil which may have fallen from the sides of the ridgelets by the action of the frost; the manure and seed are then deposited, and the ridgelets split by the double mold plow. A fine "crumb" is thus placed over the manure and seed, excluding the air and drouth, and affording a suitable nidus for the young plants; and this in a soil, which any amount of labor, by the ordinary method in dry seasons, would hardly reduce finer than a mass of clods the size of road metal. The saving of spring labor effected by this plan, is also an important item in its favor.

But to return from these digressions. The field having been properly worked, in the way which I have endeavored to explain, two plows, each drawn by two horses, proceed to open the drills which are usually twenty-seven inches wide. The manure, which has been turned about eight days previously, and allowed to attain a slight degree of fermentation, is then carted out and deposited in heaps, commonly in every fifth drill. A person follows the cart dividing the heaps equally among them, while five spreaders with small forks or "grapes," distribute the manure regularly along the drill. These are followed by an equal number of planters with the seed which they drop seven inches apart. After the plows have opened fifteen drills, they return and cover two of those first opened, in which the manure and seed has been deposited; they then open two in going, and cover two in returning, and so on; thus there are never more than fifteen drills open at once. By the method detailed, the seed and manure are but a very short time exposed to the sun and air, while I am satisfied that there is no plan more economical of labor, for if there are a proper number of men at the dung hill, not an instant of the time of any individual in the field is lost. Thus, if the dung hills are conveniently placed, two plows, three carts, three men filling manure, one boy driving, and one man dragging out the heaps, in addition to the field workers already mentioned, will finish in the best style, three Scots acres per day, supposing such were to receive forty tons of manure, about the average quantity allowed. The planting of each field is concluded by working and planting the headlands, cleaning the hedge roots, or bottoms of walls, and planting by the spade, the corners, as well as all other places not accessible to the plows. The beginning of May is as late as it is considered prudent to plant.

The potatoes used for sets or seed as they are termed, are for the most part brought from some of the high, cold districts, where the land has been lately reclaimed from a state of nature. Those from moss are most esteemed. Peebleshire and the upper ward of Lanarkshire furnish a large portion of those used in Midlothian. As the price generally exceeds the ordinary market rates, while the Lothian farmers themselves do the half of the cartage, the raising of potatoes for seed, has of late years added very much to the resources of the farmers in these bleak moorland districts.

Few subjects have attracted more attention in the agricultural world, than the cause of the failure of the potatoe crop, but it still seems hid in impenetrable mystery. It is now a well ascertained fact, that potatoes grown in the potatoe districts of the Lothians, will not reproduce themselves in a healthy manner. I observe in a late number of the "American Agriculturist" what I have heard also stated in this country, that the application of manure in the drill, tends to increase the destructive effects of rot. This I must take leave to doubt, as on the only farms in this parish, which have *entirely* escaped this scourge, the manure is never applied in any other manner. It is of the utmost consequence, that the seed should not be kept in large heaps, neither before nor after cutting, as fermentation is easily induced, and I am aware, has often taken place when little suspected. The quantity of seed used for an acre is four-fifths of a ton.

Soon after planting, the drills are rolled with a light roller, and when the stems are within a short distance of the surface, they are saddle-harrowed. By this means the annual weeds which may have germinated are destroyed, and before another braird can make its appearance, the crop is ready for the hoe. Whenever the rows can be distinctly traced, a drill grubber is passed down between them, being adjusted by means of its screw, to go as close to the young plants as is consistent with their safety. They are then immediately hand hoed, and in the course of ten days they are again horse and hand hoed, and slightly molded with the double mold plow. The growth is now very rapid, and just before the stems from the contiguous drills begin to meet, the grubber is again passed between the rows, this time narrowly set, and drawn by two horses, so as to loosen the soil to as great a depth as possible. They are now finally earthed up, and if the crop is good the stems soon begin to interlace, and in a week or two present an unbroken surface of leaves and bloom.

Early in October, the crop is raised either with the fork or plow, and stored partly in houses, and partly in long conical heaps on the surface of the ground, which are slightly covered with straw and then with earth to the depth of six or eight inches. The earth for this purpose, is obtained by digging a trench along the sides of the heap, thus forming a drain which prevents any water from lodging in the interior. These heaps or "pits" as they are termed, are generally from five to five and a half feet in width, and four feet in height, and are occasionally of great length, containing sometimes 6000 bushels.

The yield of this crop varies from eight to fourteen tons, but there have been instances of eighteen and twenty tons per Scots acre, of marketable potatoes being raised.

In the district around Edinburgh, the potatoe crop is of the first importance. This will be readily understood, when I mention that *here* four contiguous farms have always 200 or 220 acres under it, and as the manure when brought to the field does not cost less than 7*s*. per ton, it will be seen, that if to this we add rent, seed, and labor, a sum little short of £1200 is involved in the growth of fifty acres, exclusive altogether of any profit. The price which has been obtained for these two years past, was 45*s*. per ton, but some years it has reached 60*s*. and 80*s*. The moderate price of late years, has been in a great measure owing to the low price of oatmeal, and a considerable importation from Ireland.

The use of portable manures is gaining ground greatly as an auxiliary to the ordinary manure. Guano on any soil at the rate of three or four cwts. per acre, and rape dust on strong soils, at the rate of six or eight cwts., sown on the drills above the dung, are found to yield a very remunerating profit. Mixtures, containing the elements of the stem and tubers, have also been applied with great success, and as chemistry advances, they will no doubt be much more commonly used. As our scientific knowledge becomes more perfect, and more diffused, those unsuccessful attempts at the application of principles to practice will be more rare, and when they do occur, instead of throwing discredit on science, and producing doubt and hesitation, they will be referred to the true cause—the errors or want of knowledge of the operator.

I am, &c. JNO. GIRDWOOD.

LETTERS FROM MR. HORSFORD—No. VII.

Giessen, June 20th, 1845.

Mr. TUCKER—I am reminded by an American friend, that an account of a day's life in Geissen, would be interesting to your readers; and willing to minister to their gratification, at least in an effort so inconsiderable, I will give you my yesterday's history.

At half past five, I was awakened by the servant to whom I am indebted for all my home comforts. She brought me the biscuit and cup of milk which constitute my regular breakfast, and soon after my coat and boots. At ten minutes past six, I was with about fifteen other young chemists, in Dr. Fresenius' little Laboratory, listening to a Lecture upon the science of Sugar Manufacturing—the detection of impurities—the distinction between grape, cane, and milk sugar, &c., &c. You may be a little surprised to learn that this already famed man, is but twenty-six years old—one of the most indefatigable and industrious of men. This lecture was one of a course upon *Economical Chemistry*, which is given two days in the week. On two other days, at the same hour, I hear him upon *qualitative and quantitative organic analysis;* and on Monday of each week the same hour and the one following, are appropriated to blow-pipe investigation with Prof. Will, who in Giessen is second only to Liebig, and is indeed accredited one of the first organic chemists of the day.

From seven to eight, I was seated with five or six others, in Liebig's auditorium, listening to Prof. Ropp, on crystallography, and determining crystalline forms. The lectures of this gentleman are given three mornings of each week, and to them is added an exercise in crystallographic drawing, in the afternoon of Saturday, from two to five o'clock.

At a quarter past eight I was at work in the laboratory. [NOTE.—It is almost impossible to escape an almost unparalleled use of the first personal pronoun, in this personal history, and I beg that as this is by far the simplest mode of making a relation, I may be indulged in it, and moreover, that the apology which is by me deemed due, shall be sought in an honest wish to satisfy the not censurable curiosity of my friends in relation to the Giessen chemical school, and student life in Germany.] Just now, my first duty in the laboratory, is the microscopic examination of some fluids in ferment. The essential cause in fermentation is not yet settled and is full of interest. This occupies me but a few moments. I then go to labors with ash and mineral analysis, which it would be impossible to detail, and to organic combustions, which alternate with the former, as processes are waited for, to preparations of re-agents, &c. At five minutes past eleven, I was listening with about ninety others to Liebig's lecture. It is every day of the week. His lecture, always brilliant, and yet possessing this attribute quite independent of experiments, continued till about half-past twelve,—sometimes it continues till nearly one.

I received, two or three days since, the Cultivator, containing my first impressions of our great teacher; and warm as was my admiration when those impressions were committed to paper, it has only increased with each day's acquaintance. It is as impossible to give an adequate idea of these lectures, as it would be to revive Raphael's studio and its master through the letter of a correspondent of this century. Pens, paper, and language have an humbler office. In the lectures upon hydrogen, we have, I presume, from forty to fifty experiments daily, and in others, scarcely a single experiment, and yet all quite alike interesting. Indeed, in the review, I find it much more difficult to recall experiments, than the statements he made—so rich in thought are these every-day communications. This is their distinguishing attribute. It is the practice in all the lectures to take notes in ink of every proposition, experiment, explanation, and application—otherwise it would be beyond human power to recall any proportion of the mass of fact and theory which is given. I use this word theory not in the sense of censure, which is the more frequently mistaken conception of its meaning. A theory is an explanation of phenomena.

The lecture was upon arsenic, with all the modes for its detection in organic matter, and then an especial course for its unvarying detection, without compounding with antimony. As it is exceedingly simple and may be of service, I will give it you.

Put the food, stomach, intestines, or other matter supposed to contain arsenic, either as the lower or higher acid, in a vessel containing water—boil with the addition of hydrochloric acid, and successive additions of powdered chlorate of potash. After boiling till the organic matters rise to the surface, or coagulate—filter, and all the arsenic will be in the liquid as *arsenic acid*. Now boil with sulphurous acid to reduce the arsenic to arsenous acid, and continue boiling till all sulphurous acid is expelled. Then add sulphuretted hydrogen, either from water saturated with it, or by the gas—and all the arsenic will be thrown down as a sulphurous compound. Filter, and there will remain upon the paper, beside the sulphuret of arsenic, perhaps some organic matters. Re-dissolve with ammonia, and the organic matters remain in the filter, while the sulphuret goes through. Hydrochloric acid throws down the sulphuret again, which may be filtered and dried between absorbing paper, and finally in a water bath or sand bath, or on a stove, with some paper around it. When dry, take a mixture of one part of cyanide of potassium to three of carbonate of soda, and rub them well together. To one part of the sulphuret of arsenic, add twelve of the mixture, and rub them in a mortar. Bring this mixture in a tube of half an inch in diameter or a little less, and lead into it dry carbonic acid gas, to expel all atmospheric air. After gently heating this tube throughout its whole length with a spirit-lamp, to draw out all moisture, bring a strong flame under the mixture and heat to redness. The arsenic will abandon its sulphuret, and at a little distance be precipitated upon the glass tube forming a metalic mirror. If antimony were present, it would remain behind. This simple experiment is perfectly decisive—a metalic mirror in this instance can have come from nothing but arsenic.

At the close of the lecture, I went to my lodgings to dinner. Most of the chemists dine at *The Rappen*, a hotel where the suite of dishes amounts to ten or more. I joined them last winter, but finding the fare too luxurious, I sought the more prevailing mode of German students, that of dining on prescribed dishes, whose number and variety can be controlled. My dinner of yesterday was a kind of bread and milk soup, an early favorite dish—a bit of wild swine flesh, potatoes, and a dessert. The soup, meat, vegetables, and dessert, are varied every day. While my dinner is being arranged and at its close, and indeed as it progresses, I review my notes of the morning lectures.

Half an hour after dinner is given to the Cultivator, Argus, and Journal—sheets for which I feel an indescribable affection here, and for which I feel grateful to my friends—and I enter the laboratory to work on till half-past six, or later, as the case may be. Then I go to walk, or, with more than two hundred others, distribted all along the river for a mile, to bathe in the Lahn. The temperature, which has for the last few days ranged from 80 to 92 degrees, drives sleep out of possibility without it. At eight I am in my room—occupy the time till half-past ten with calculating analyses, reading the chemical journals, and closing the affairs of the day. Before resuming the books, however, I repeat my luxury of the biscuit and cup of milk.

Thus passed yesterday. On two other days of the week I hear Prof. Will upon inorganic analysis, a course which I heard in the winter, and through which I have worked in the laboratory, but which I cannot permit to pass unheard, so impossible is it to make a step of progress in inorganic chemistry without familiarity with all known reactions, or at least with the scheme of inorganic analysis.

Respectfully yours, E. N. HORSFORD.

MR. MITCHELL'S LETTERS—No. X.

Paris, Aug., 1845.

LUTHER TUCKER, Esq.—There being little to mention of Agricultural interest at Paris, I propose to give you in the present, some scattered notes of British travel. My observation extended over nearly all England—only two counties, Shropshire and Norfolk were unvisited. Through Berkshire, Oxfordshire, Warwickshire, Cumberland, Westmoreland, and a large part of Derbyshire, and Berwickshire, (in Scotland,) I strolled on foot. During this pedestrian range of over three hundred miles, I took frequent occasions to visit the farm houses, and laborer's cottages along the way; have observed as closely as circumstances admitted, the habits of the industrial portions of the population, have conversed with them at their simple homes, and in the fields, and not unfrequently have made trial of their implements of husbandry beside them. Two or three bouts round a field in South Devon, I remember going, with my hands to the stilts of a crazier plow than I ever saw in the most retired districts of New England. Only a month since, I wearied myself to exhaustion with one of the heavy Cumberland scythes, which, though exceedingly clumsy, and ill fitted in every other respect, are of the best tempered metal, and retain a fine edge. The mower was at first, unwilling to trust his scythe in my hands, but after promising him a sixpence *pour boire*, he willingly granted the favor, and admitted the work to be very fairly done. Should circumstances admit, the results of this observation may be reduced to something like method. In the hurry of travel, and the excitement of constantly recurring novelties, I can only snatch from my note-book a fragment or two, which may be of interest to your readers.

And first, of the famous model farm at Dublin. On the 28th of last April, I took a car in Sackville-street, and instructed the carman to drive me to the model farm, near Glasnevin, about three miles from the town. The environs of Dublin, in point of judicious and thorough cultivation, are surpassed by those of no other British city, and, in respect of rich scenery, are excelled by none, except perhaps those of Edinburgh. In fact, the whole country, for three or four miles about the town is a garden;—not a garden only in the richness and variety of its products, but from the fact, that nearly every inch of its cultivated soil is turned up with the spade, and levelled with the rake. The plow is indeed used, and of every variety—the subsoil, the wheel, and the double mould, but the spade, within the distance of Dublin above mentioned, invariably attends, or follows their operation. The consequence is, a heavy tilth, that gives the grasses a dark luxuriance of growth, and to every crop a most extraordinary robustness.

The model farm offers no exception to these general appearances; indeed, its fields are distinguished from its neighbors, by the neatness with which the crops were laid down, by the trim attire of its fences and hedges, and if possible, by the superior exuberance of its vegetation. Stopping in a little lane which turns off the high road, and leaving the car at a pretty white gate, opening upon the approach to the farmery, I strolled down the gravel walk toward the house, which was but some seventy or eighty rods distant. On either side of the way, were slight hedges of flowers and shrubs, over which were seen in rich profusion the many colored crops of the farm. The house is of stone, sufficiently large to accommodate sixteen or seventeen apprentices, beside the proper offices of husbandry, and is without any great pretensions to architectural style. But there are vines being trained over it, and a thousand little decorations of shrub and flower, which are better than such pretensions, and which show that scientific skill, and first rate practical abilities may be, and are associated with regard for, and love of beauty, without harming the one or the other.

The farm is a level surface, in the form of a paralellogram, and of about sixty acres in extent. It has been in the occupancy of the present proprietor but a few years, who leases it,—subject to the general supervision of the agricultural board, at a rent of $1,500 a year. Sixteen or seventeen young men, such as are recommended to the board, are apprenticed to the farmer, and perform all the labor, without other remuneration than their board, and the opportunity to learn proper farm management. Besides these, a very large and fluctuating number of persons preparing for school keeping in the agricultural districts, attend at the farmery two mornings in the week, for lectures upon agricultural subjects, and every Saturday, for personal observation of farm duties.

The manager is no humbug; neither overrating the aids of science, nor underrating the advantages of field practice; he understands his duty, and has the energy to fulfil it. I found him in the cattle yard, giving some final directions to the stable hands, before going to the fields. The yard is a square, with the sheds and stables about it, upon every side except the south. It there opens into a larger yard, into which the cows are turned for an hour or two every morning for exercise. The number was, I think, twelve, beside several young cattle. They are fed wholly in the stalls, upon fresh cut Italian grass, bruised oats, and in winter, roots and hay. These cattle, with several horses, two or three at least, are sustained, and in first rate order, from only thirteen acres in grass, beside, as the manager assured me, putting up several tons for winter use. The cows are of no particular breed—being intermixture of the Ayrshire and

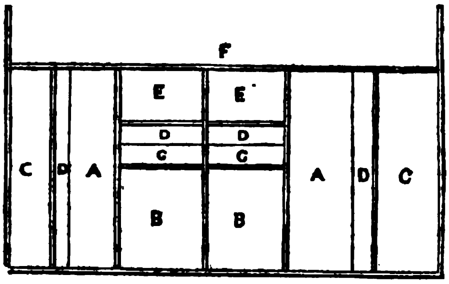
Durham, and Devon, with some traces of Jersey blood. One or two were crosses of the Short-horn and Ayrshire; but if I remember rightly, no pure blooded animal was in the herd. And it may be remarked in passing, that the cows about Dublin seemed to me superior, in all those points which make a good milker, to those I have met with in any other part of Britain. Eight quarts at a milking was the average yield at the model farm. Great attention is paid to the making of manure, and the system of soiling, the best possible for securing most fertilizing material, is thoroughly pursued. From six to eight hundred tons are made in a year. Draining and subsoiling are practiced upon the most improved plans; and the lessee was earnest in his commendation of them; he pointed me out a bit of land which presented a rough, yellowish, and altogether most unfruitful appearance, occasioned by subsoiling; "but," said he, "after two or three weeks of sun, and one or two thorough dressings, I will bring it to the condition of that along side it, which was last year in the same case," pointing to a strip of rich black loam, preparing for a crop of ruta bagas. Thorough tillage is his motto, and he regards the spade as the best of all implements of husbandry, which for England, Ireland, and Scotland, it undoubtedly is, both for reducing the land to the best possible state of cultivation, and socially, for giving employment to the thousands who are poorly employed, and in consequence, poorly fed.

Every variety of crop is raised upon the farm to a greater or less extent. Of all the grasses, the Italian rye grass is his favorite, both for nutriment and yield. Little clover is grown. The winter grains were promising well, but his chief dependance is upon the products of the dairy. The field work for the day, at the time of my visit, was the preparation of an acre or two of ground for ruta bagas. It had been plowed I know not how many times; all that remained to be done was the throwing of wide furrows with the double mould plow, at intervals of two feet—the strewing of manure, in no stinted quantity along the whole length of the drills, the lapping of a furrow from either side over the manure—the running of a light drill upon the top of the ridge—the dropping of the seed—careful covering with the hand-hoe, and the running of a light roller over all. The management of the farm dispenses with most of those labor saving machines, which prevail in many parts of England, and which do all operations at once. It is the policy of the manager to do every thing in the best possible way; and in ordinary cases, for the best possible way, a man's hands are the best possible means. Beside, whether overlooked or not, it is very desirable to offer to the land-holders of Ireland, such demonstration, that it is their best pocket-policy to bring into active employment all the idle hands of the kingdom.

I need hardly say that entire order prevailed in all the work—that every hand had its peculiar duty to perform, that every implement was in serviceable order, and had its place when unused, that the buildings were of the utmost neatness, all of them admirably designed for their particular purposes. In short, it is a model farm, not only for Ireland, but for whoever raises a crop. And its influence is felt more and more; not only in the immediate vicinity, where the mode of cultivation has improved latterly to a wonderful extent, but in distant districts where the school-masters, who derive their notions from weekly observation of such exemplary management, have carried their instructions. Nor is this institution the only one in Ireland. At Leopardstown, south of Dublin, and upon a gentle eminence overlooking the bay, has lately been established an Agricultural College. I passed it on my way through a most beautiful country to Wicklow, but unfortunately had not time for a visit. At Londonderry, in the north, or near it, is also a similar establishment, said to be the oldest of its kind in the United Kingdom. By the aid of these institutions—not only of their special instructions, but by the spirit they diffuse, the agriculture of Ireland is gaining ground—literally, gaining ground, year by year; and who does not believe that similar establishments, here and there, in our country, even though they should be set on foot by the enormity of a public appropriation, would be equally advantageous?

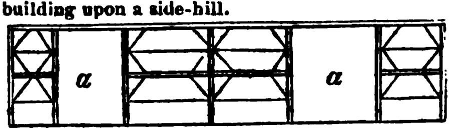
By my next writing, I shall probably have resumed my line of march, and may give you some notes of a pedestrian ramble towards the eastern borders of France, until then remaining, Yours truly, D. G. MITCHELL.

Domestic Correspondence.



PLAN OF A BARN.—Fig. 88.

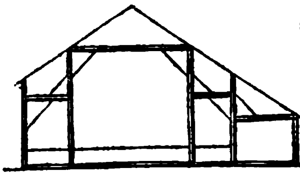
The accompanying plan was drawn at the request of a friend, and gives very good satisfaction. It is designed principally for neat stock, but with little variation would make a sheep-barn. It is intended for a side-hill, the front resting upon a wall. It would be desirable for the ground to slope to the south, as the yard would come upon that side. There are many advantages to be gained by building upon a side-hill.



Side view, resting upon the wall.—Fig. 89.

REFERENCES.—A A, lower floors, 9 feet wide. B B, bay, 20 by 30. C C, stable, 9 by 35. E E, stable, 10 by 30. D D, manger, 3 feet wide. G G, space, 3 feet wide. F. shed, 10 by 70. *a a*, barn doors.

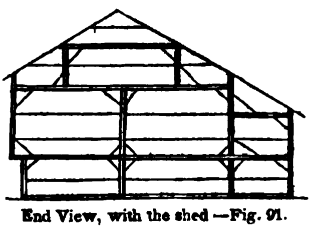
The main barn is 70 feet by 35, being more convenient to have greater length than width, with a shed 10 feet in width the whole length. The basement is framed by itself. It has 100 feet of stabling, without taking the upper story.



Centre Cross-section.—Fig. 90.

The upper story is similar to the lower, except that the barn floors are above the lower floors and manger; the whole of the upper story being covered with floor except the bays.

Some objection has been made to the beams being made so low. Having conversed with an experienced carpenter, I found there was no objection to framing them into the false plates, the inside bents being so that they will not interfere with unloading, as may be seen in fig. 90.

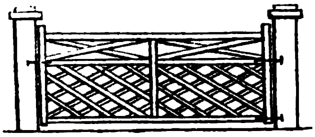


End View, with the shed.—Fig. 91.

One of the greatest advantages of this plan, is in unloading the hay, requiring only one hand to take it away in any part of the barn, the hay being seven feet lower than the floor where the cart stands.

This plan will admit of many alterations without altering the principle. A SUBSCRIBER.

Winter grain, if not already in the ground, should be sown as soon as possible.



ORNAMENTAL GATE.—Fig. 92.

The frame is composed of hard wood sticks, 2¼ inches square; the lattice of boards 2 inches wide and ¾ of an inch thick, well riveted together at each crossing, which prevents the possibility of swagging.

Middlefield, Ms., 1845. LAWRENCE SMITH.

GOOD SHEEP—HEAVY FLEECES.

I have noticed, Mr. Editor, some statements of the high shearing properties of Col. Randall's flock, A. L. Bingham's, and some others, in the last two numbers of the Cultivator. These facts are of some interest and importance to all engaged in sheep husbandry. In your recent visit to Vermont, had you extended your tour as far as Williston, I could have shown you a very superior flock of sheep, which for the number, I think, is not far surpassed by any other in New England. Let me give you a few facts in regard to the shearing of my last clip. Each fleece was weighed as it came off, with steel-yards, that had been compared with Fairbank's Patent Scales, and found to be perfectly accurate—and the weight was recorded at the time.

I had 42 ewes that sheared six pounds and a quarter of very clean washed wool. One yearling buck that sheared 8 lbs. 10 ounces. And one, also a yearling, which sheared 10 lbs. and 8 oz., and the shearers will testify that the wool was very thoroughly washed. I had 3 sheep that sheared between 7 and 8 pounds—12 that sheared nearly up to seven—and so on, and 88 that went nearly to six lbs. each. Of my whole flock of 207—90 of which were yearlings—the exact average was five pounds and three quarters of an ounce. Some of the yearlings went as low as 3¼ lbs., and two old ewes that had shed a great part of their wool went below three pounds. I have seen no account where the average on so large a flock was so great. My flock has been established within two years, and I have spared no pains or expense in making the best selections. My flock is made up of Gaudaloupes from the Shaker Farms, Enfield, N. H., and of Paulars, so called, from the flocks of the Messrs. Cutting, and Mr. T. C. Wright, Shoreham, and M. Bingham, and A. L. Bingham, Cornwall, Vt., and of that very superior flock, J. I. Bailey's, Newport, R. I. I paid from $10 to $30 each, for my ewes, and $40 for my best yearling buck, when a lamb about four months old. This last was purchased of Mr. A. L. Bingham, of Cornwall, who has refused $50 for the own brother to him, a lamb of this season. I consider this buck as the very best I ever saw. I have about 20 lambs from him, and they show him to be a stock getter of the highest order, having very thick and very fine wool, and so like the sire, that you, a stranger, would be able to select them from a flock of 90, after you had once seen him. He is a buck of very large size for his age—of proud and lofty carriage —of great strength and courage, and strong constitution.

I wish, Mr. Editor, that we could get the average weight of the entire flocks of A. L. Bingham, Col. Randall, &c., &c. If the average is taken on a small portion of a flock, it gives us no adequate or just idea of the whole. I find if I take my average on 53 instead of 42, that it is reduced to exactly 6 lbs. each.

I would give you the following general statement of my shearing, which will lead you to understand about how my flock stands. Of ewes with lambs by their sides, except where they were yearlings, three sheared over 7 lbs. each—12 from 6 to 7 lbs. each—48 from 5 to 6 lbs. each—and 88 from 4 to 5 lbs. each. The balance of the flock of 207, sheared below 4 lbs each.

I have about 250, old and young, full blood, pure merino sheep; 90 of the number are lambs. The balance are one, two, and three years old. I have a few high grade sheep, which I intend to dispose of, so as to have nothing on my place but pure blood merinos.

Williston, Vt., Sept. 12th, 1845. L. G. BINGHAM.

P. S. You see I have given you an account of the worst as well as the best end of my flock. I wish that others would do likewise. Then we could compare notes with proper data to go upon. "The truth, the whole truth, and nothing but the truth," is my motto. Will your correspondents enlighten us?

CLEARING LAND.

L. TUCKER, ESQ.—You inquire, page 152, May No. Cultivator, for an article on the best mode of clearing land. I trust you are in possession of a better article than the following; if not, this is at your service.

Girdling or belting, where timber and wood are of little or no value, is the usual, and I am of opinion, the best mode, and to be the first step, in clearing land. If deadened a few years before cleared and brought into cultivation, the bark, limbs, and much of the sap part of the timber becomes decayed, and forms a valuable and lasting manure; whereas, had the whole been cut and burned while green, not only the decayed part above alluded to, but much of the vegetable mold, or soil of the land, would have been also consumed.

The trunks of the trees must necessarily be burned upon the land; and the larger the log heaps the better, as less surface is burned over.

I believe it is universally admitted, that burning over land is injurious to the soil; but the ashes made and allowed to remain, where log heaps and large brush heaps have been burned, fully restores the injury done. I can conceive no soil benefited, by burning anything that might otherwise decay on it. Except in extreme dry weather, by burning of new ground clearings, or even log heaps, the organic or vegetable matters are seldom destroyed to any considerable depth; but the proportion burned becomes heavy and inert; and if all, to the usual depth of the plow were burned, the result would be the same, as if spread to that thickness of brick dust made from the same material.

To obviate any danger from burning wood on the land, I would recommend establishing manufactories in the vicinity of them; which would soon add a greater value to the wood, than to the land when cleared.

Such is the fact at the north where manufactories are established, and villages have sprung up; such is the case in the sugar districts in Louisiana, and along the rivers and water courses of the whole country where steamboats and vessels ply, and commerce is carried on. In a word, the most profitable mode is the course usually taken, especially by new settlers. Deaden the timber, cut and burn the under brush, and put in a crop; afterward, and before the limbs and trunks begin to fall, to endanger life and limb, cut down and burn; and what is very important—go ahead. Yours, truly,

New River, La., 1845. S. TILLOTSON.

DESTROYING ALDERS AND OTHER BUSHES.

EDITOR OF THE CULTIVATOR—Sir—On the receipt of your August number, I noticed the article on "Killing Alders," and your invitation to others for facts on that subject.

Mr. Jefferson somewhere suggests the importance and utility of perpetuating the experience of old men, and agriculturists depend so much upon facts for what they do, that I am induced to state my own experience on this subject.

In the town of Salem, Washington county, N. Y., where I have resided for more than forty years, I have been in the habit yearly of cutting all kinds of brush that sprout in the open and cleared fields. This has been done in the months either of July or August, in the old of the moon, when the sign is in the heart; and when it has been done on the day the moon changed, but before the change, the sign being in the heart, it has never failed, to my recollection, to destroy the brush.

JOHN CRARY.

Salem, August 18, 1845.

NOTES OF TRAVEL IN THE SOUTHWEST—No. VII.

BY SOLON ROBINSON.

Once again, my friends, I come with my monthly greeting. Well, where parted we company last? Let us reflect. We had just visited Mr. Leigh, and given a slight sketch of his method of *farming*, which I have italicised to give the term a contradistinction from that of planting—the latter term meaning only the cultivation of cotton. But before leaving Mr. Leigh's neighborhood, I must notice that I was on President Polk's plantation, and earnestly hope that his cultivation of Uncle Sam's big plantation will be as well managed under the overseership of Mr. Polk, as his Mississippi cotton plantation is reported to be. The next point of interest that I visited was the plantation of Captain Wm. Eggleston, of Holmes county, who is one of the good farmers of Mississippi. He is a Virginian, from Amelia county, and having an introduction from his friend, Mr. Leigh, I met with a very hearty reception.

The 17th of February was an uncomfortably warm day. The peas in Captain E.'s garden several inches high, lettuce in full head, and other things in proportion. Captain Eggleston has about 1,400 acres of land under cultivation, and upon which live 20 whites, and 150 blacks, 70 of which are field hands; about one-third of his land is kept in corn and oats, the proportion of corn being as two to one. He keeps up a continued rotation of crops, and puts all the manure that he can upon the corn, which averages about 25 or 30 bushels to the acre; plants corn and sows oats in February. He is now working 43 mules and horses, and 28 oxen, and makes 560 bales a year, which he has to haul 10 or 12 miles. He also raises all the grain and meat required upon the plantation, feeding his negroes at the rate of 3½ lbs. clear bacon per head per week, with about a peck and a half of corn meal, besides vegetables and fruit, melons, &c. Like Mr. Leigh, he gets his flour from Virginia, and asserts that no other will keep well through the summer.

I saw in his garden some very fine fig trees, which as far north as this produce remarkably well. Peaches are unfailing, but with grapes he has not been successful. Apples are not a southern fruit, yet many are attempting their cultivation. And now a word of Captain Eggleston's system of cultivation. His place is all hilly, thin, oak land, very light soil, that melts away in water not *quite* so easy as salt or sugar; and yet he has scarcely a gully upon the whole farm; but he has more than 20 miles of side hill ditches, which are so constructed that they take up all the surface water before it passes far enough over the ground to form gullies.

While riding over the plantation, I found one of the overseers engaged, with a large force of hands, laying off and making ditches upon some new ground, it being a rule never to put in a second crop until the land is ditched.

I will attempt a description of the very simple instrument used as a level. It consists first of an upright standard about five feet high, the lower end sharpened to stick in the ground, and about a foot above is a shoulder, upon which rests a frame made of thin cross bars, tennoned at each end into uprights, about four feet long, one bar at top and one at bottom, and one in centre, with holes through which the upright passes, and upon which it plays freely. This standard being set in the ground and a plum line brought to rest upon a scale previously graded to the required fall of the ditch, the operator sights along the middle bar until it strikes the ground at the point where he would commence the ditch, and then moves it round the face of the hill he wishes to circle, having the various points marked as far as he could extend the view from that point. And here I cannot refrain from mentioning a very remarkable fact which I saw, and which Captain E. assured me that he had often witnessed, but could not account for. He had a negro boy—not a very remarkably bright one either—about a dozen years old, who being stationed at the starting point of the ditch, would start upon a smart trot round the face of the hill, and when he had gone as far as he thought necessary to strike a stake, he would stop, and never four feet out of the way. Query, had he a water level in his head? How can his leveling faculty be accounted for? I wish some political *levelers* had as happy a faculty of always being right.

When the line is thus staked off, the same boy walks back upon his track, picking up the stakes, while the overseer guiding a horse drawing a slightly marking plow held by another hand, follows on, and thus makes the line of the ditch for the big plow that follows, and in turn is followed by hands with hoes until the ditch is completed.

The alteration that I would recommend in this instrument, would be to substitute a spirit level for the plumb line, as on a windy day the line is too much affected.

This level upon hilly land is much preferable to the rafter level, and is as easily made.

As before remarked, the rows have to conform to the ditches, however crooked, and the manner of plowing is to lay off the rows in the first instance, the middles often being left unbroken until after the corn is planted, and perhaps up. Captain Eggleston's plan is to plow deep directly under the corn, and plow shallow while tending the growing crop. His motto is to plow deep for all crops. He assures us that since he has adopted the level system of ditching and plowing, that in addition to the advantage to the land, that his crops are better and the soil improving instead of deteriorating.

All of his mechanical work is done by his negroes upon his plantation. He has two negro carpenters that he occasionally hires out to others at the rate of $40 apiece per month. He estimates that he has ten miles of plantation roads, and 20 miles of rail fence, more than half of which is to fence against other folks' cattle instead of his own; and this fence has all to be renewed once in seven years, as in this humid climate that period is the length of durability of rails. What an enormous tax! And with the enormous waste of timber going on, how long will it be before all the rail timber is exhausted? What is to be done then? What is to be substituted? It is time this matter was thought of even amid the forests of Mississippi. There is another matter that ought to be thought of too by every cotton planter. What are they going to do when the supply of basket timber is exhausted, as it already is in some parts of the state? Will they send to the north for these indispensable articles? Well, so be it. We are ready to furnish you, and we will soon learn that you cannot pick cotton without baskets. I advise you to commence immediately the cultivation of Ozier Willow. It will grow upon all your creek banks, and it will make a more handsome and valuable fringe than many that I have seen in the middle of your fields. There is another article that grows almost spontaneously upon some of the rich bottoms and waste corners of your plantations, that would bring money if sent to market; and that is red pepper, the grinding of which you can do in your own mills, and pack in your empty flower barrels—try it. You can get the willow from New-York; I don't know in particular from where, but I will venture to name my friend, Charles Downing, nurseryman, Newburgh, whose honesty I have great faith in.

And begin in time to husband your resources for fencing. Don't pursue a course that I witnessed a few days ago. Deadening good rail trees within the proposed enclosure to stand and rot down, and going outside among the standing timber and cutting down the trees for rails, and for the reason that by so doing it saved the trouble of clearing up the tops within the field—those outside could lay undisturbed to rot.

Leaving Captain Eggleston on the 18th, the first plantation I passed was one that once had been a very fine one, of comparative level and rich soil, now in utter ruins: Cause—debt, law and taxes. Fences, buildings and land all in ruins; the former rotted and fallen down, and the latter gullied away. In the midst of all this desolation, an ancient mound reared its lofty head, looking still more the lonely monument of an extinguished race than it would when met upon the wild waste where *civilization* had not yet set its more enduring mark. Even here upon this monument the hand of the white man had been, and exposed to view the interior, "full of dead men's bones."

After passing Lexington, the county seat of Holmes, which is rather a pleasant-looking town, we begin to leave the hilly country, and find one, though of the same kind of soil, much more level, and showing more good farms, upon several of which I saw large forces busy planting corn. Cotton seed is much used for manuring corn, sometimes spread broadcast and sometimes put in the drill with the seed, which is generally planted in drills and covered with the plow.

From a Mr. Adams, whose hospitality I partook of this night, I learned that hot ashes are a very effectual remedy for what is generally called "the damps" in wells. They appear to absorb and neutralize the gas—so he says. It is easily tried. Mr. A. is a great economist of manure, and plows his land upon the level system, but without ditches, which Captain Eggleston says, upon side hills is worse than straight up and down. Mr. Adams' land is, however, comparatively level.

February 19th, I passed through the town of Benton, the county seat of Yazoo, and which is so superior to its namesake in Missouri, both in appearance and character of its inhabitants, that one or the other ought to change its name, and principally though for the reason that papers directed to one often get astray to the other. I regret that the anxiety that I began to feel to reach Log Hall, prevented me from making a stop at this town and forming more close acquaintance with some of the many friends and readers of the Cultivator that in a very short visit I found here. It was then my intention to return, which circumstances prevented. Although I would not make distinctions among friends, yet I may be permitted to signalise Mr. Jenkins, the P. M., and Wm. Battel, Esq., whom I found most active and anxious to encourage the reading of agricultural papers.

A few miles west of Benton I called upon John M. Cullen, who has invented, as he thinks, an improved cotton scraper—it being a small piece of steel attached to a plow in such a manner that he can "bar off" and "scrape" at the same time. I witnessed a trait in Mr. Cullen's character that I desire to mention, together with the wish that others would do likewise.

He owns a pond, which is the only watering place for teams upon the road for a long distance, and which he necessarily had to enclose; but instead of shutting the public out, he has gone to considerable expense to provide for their accommodation, and has put up a sign of "Bethesda," the meaning of which Bible readers will understand.

But let us go on with our wonders. To-day I first met with the "Spanish moss" regions, which, contrary to the opinion entertained by many, that it only grows upon trees in swamps, is found equally abundant upon the hills. I don't know that it shows any preference in the kind of tree it grows upon, for it is not a parasite; that is, so far as I could observe, it appears to have no connection with the tree, but hangs loosely upon the limbs, sometimes hanging down two or three feet. Its color is silvery grey, and when all the trees in the forest are thickly covered, it gives a curious appearance. Although at the north we esteem it valuable for mattresses, &c., it is here but little used.

This evening I crossed the "Big Black," a stream large enough for steamers in high water, but for want of improvement but little used. It runs through a wide, rich, overflowable bottom, entirely uncultivated. During two days ride I passed land that was not yet clear of timber, that had been worn out and thrown out of use. This bottom land would be more enduring.

In this region of the state there is great difficulty in getting wells, while streams and springs are few and subject to dry up; and though every body ought to have cisterns and artificial ponds, yet every body has not, and none that I have met with seem to be "fixed," but are ready to sell out and hie away to Texas, or some other place "further west."

February 20th I travelled on a very broken and poorly cultivated part of Madison and Hinds counties; passed several "gone to Texas" plantations, the appearance of which give the country a desolate look.

Enquiring for Dr. Phillips, I found that "a prophet is not known in his own country," and that if a man wishes to distinguish himself "among some folks," he must turn politician, instead of becoming a writer for agricultural papers. However, most that I inquired of seemed to know that the Doctor lived somewhere, though the exact where they could not tell, and for which latter piece of ignorance I did not much blame them after I knew myself, for a more out of the way place can't well be thought of. Knowing that his post-office address was "Edwards' Depot," I easily found that, but I cannot say that the seven miles from there was so easy to find in the night, or so pleasant to drive over; but perseverance accomplished the task, and I found the Doctor and his family so much more pleasant than the route to his place, that with the reader's permission who has traveled thus far with me, we will tarry awhile and partake of heartfelt hospitality while resting from the fatigue of our thousand miles journey. And now for another short month, dear reader, a kind adieu from your old friend and fellow traveller. SOLON ROBINSON.

SEEDLING PEAR.

LUTHER TUCKER, Esq.—Having read in the Cultivator for June last, the communication of Judge Darling, of New-Haven, in this state, relative to the seedling pears cultivated by Gov. Edwards, of the same place, I concluded I would send you a sample of a seedling pear which has been cultivated in this vicinity for a period of nearly or quite one hundred years. They are known by the name of "Pineo pear." It is said that the elder Dea. Pineo, who formerly lived in the North Society of Lebanon, (which is now Columbia,) found a young pear tree growing wild in a piece of wood land. He took up the same, set it out near his dwelling, and the result was the kind of pear which I send you. It has been cultivated by budding and grafting, so that many of the farms in this and adjoining towns have one or more of this kind of pear tree, which have long been in bearing. No sales of these pears have been made until within a few years, when a fruit dealer in the city of Norwich chanced to purchase a few of them in their hard state, which he considered of little value, and they were left in a barrel for nearly two weeks, when, having occasion for the barrel, he found on examination, that the pears had become mellow, were juicy and very delicious, and that the fruit he had considered as nearly worthless, was really a valuable kind.

He has introduced them into the Boston market, and they find a ready sale among the lovers of fine fruit in that "city of notions." In fact, they have so grown into repute within the few years past, that fruit dealers in Hartford and Norwich have been out to engage them of the farmers in advance, before the fruit was ripe enough to be gathered from the tree. Mr. Truman, a fruit dealer in Norwich, told me a few days since, that he thought the variety was peculiar to this region, and would not succeed well in any other locality. How this is I know not, but have been informed that people who have moved from this place to the western part of your state, have taken with them the scions of this pear, but when the trees came to bearing, they were nothing like the "Pineo pear." I also put in the box a few peaches, which are seedlings of my own raising. Should the box arrive before the fruit is injured, will you please to give your opinion as to its merits, and how it will compare with the pears raised in your vicinity.

JOHN S. YEOMANS.

Columbia, (Ct.,) Sept. 1st, 1845.

[The box of pears and peaches above spoken of by Mr. Yeomans, and for which he has our thanks, arrived safe on the 6th of Sept. The fruit was however too ripe, generally, to test its real qualities. The pear was tasted by several, and pronounced decidedly good. Its size is more than medium; form handsome; color fine light yellow with minute rusty dots; and its flesh rather melting and sweet. We presume it is not overrated by Mr. Y. The peach is a middling sized, pretty fruit. Color yellowish, with a beautiful bright blush. Quality middling.—ED.]

A KITCHEN GARDEN—FRUITS AND FLOWERS.

Reader, if you want to see something in the vegetable kingdom a little earlier, and a little nicer, than you ever saw it before in this climate, just drop into the fruit yards and gardens of Eleazer Burnham, Esq., and his son-in-law, Dr. Alexander Thompson, at Aurora, Cayuga Lake.

Only one mile east of this place, 400 feet above the level of the Lake, nearly every thing of the fruit kind has been cut off this season, by a biting June frost; but here, directly on Aurora bay, under the warming influence of this never freezing lake, the tomato, the egg plant, the tender grape, and the peach, are in luxuriant progress; corn, planted in April, begins on this, 20th of July, to glaze; early potatoes, very much pinched by drouth, are now ripe; most other kitchen truck is in great perfection.

Here are ornamental trees, deciduous and evergreens, and flowering shrubs of every hue and variety; to say nothing of the earlier berries, cherries, gooseberries, &c., &c.; here is the Bon apple fully ripe, as is also the luscious little apple of Eve, on its tiny, bush-like tree; the delicious Seckel pear tree is so thickly beset with its unripe blood-red fruit that its leaves are thrown into the shade. Apricots, nectarines, plums, peaches, and clustering grapes, are giving an earnest of early fruition, such as but few, even in this fruitful land, have it in their power to enjoy.

But how shall I describe the flower garden, with its winding, circular, any thing but straight, gravelled walks; with borders of stone crop, Phlox, and *Buxus sempervirens;* its concave, crescent-shaped, many sided beds; to undertake to name the genus, let alone the legion variety of these beauties of the floral creation, which now bloom here, is more than my poor pen can compass; suffice it to say, that here are flowers indigenous and exotic, from every clime,

"Where woman smiles or sighs."

That which occurred to me first, was, how so much labor could be done at so little expense; the absence of every weed, the finely ameliorated soil, the extreme good taste in the arrangement of the flowers and the house plants, in their rustic boxes, the picturesque disposition of the beds, and the flowering shrubs; above all, the order, beauty, freshness, which pervaded all; was *prima facie* evidence to me, that no mercenary hand, no clodhopper foot, had been tolerated here. It was evidence positive that the result here produced was the effect of that labor, and those combinations, which enthusiasm alone can originate and direct. Mr. Burnham himself is too far in the "sere and yellow leaf" to lend his physical aid to the work, but Dr. Thompson finds both mental and physical renovation in the labors of the fruit yard and garden; here is also a single young man, a servant of all work, an Englishman; but not the dull, leaden-eyed, stupid, obsequious, serving man of old England; I am told that he spends much of his leisure time in Dr. T.'s library; here under the doctor's instruction he has learned something of geology, agricultural chemistry, and botany; this "little learning," pronounced so "dangerous" in the old world, has come to be, under our republican institutions, the best "*support to the throne,*" the only guarantee to popular civilization, the parent of that exalted enthusiasm, without which there is no upward progress; nothing to separate the intellectual laborer from that biped drudge of grossness and ignorance, who has too long been honored with the title of *a laboring man.*

S. W.

The Moon out-generalled.—A lady of our acquaintance, lately fairly out-generalled the moon. In making *soap* (over which the moon and the witches seem to have great power, according to some,) she was particularly unsuccessful, though her ley was strong, and every thing else apparently right. She was promptly informed by an experienced neighbor that she had undertaken the business exactly in the wrong time of the moon. A young chemist, who happened to be present, discovering that the ley effervesced strongly in acids, and was therefore not caustic enough, applied quicklime in small quantities to the obstinate and half-made soap, when in a short time all lunar influence was withdrawn, the planet struck its colors, (if it ever had any,) and a fine lot of first rate soap was produced. T.

DRAINING MARSHES AND PONDS.

Mr. Tucker—Among the many little obstructions which nature has placed in the way of the practical farmer, none appear more repulsive than those little swamps and marshes which are here and there promiscuously seen in the midst of fertile lands, often surrounded by high ground, which seem to baffle the industry and defy the skill of the agriculturist, to drain or fill up. The result of an experiment last summer in draining one of this kind, I purpose to give for the benefit of those who are similarly annoyed by a swamp surrounded by land so high that it is impossible to drain it in the usual manner of ditching.

There was situated in the centre of a field a pond of water, covering about half or three-fourths of an acre of ground, in which water has remained for a great number of years past, from three to four feet deep, surrounded by ground rising in every direction from the centre of the pond, so that it seemed impossible to get a ditch deep enough to let the water out. The soil of the surrounding field is of a sandy quality, and in the bottom of the pond is of muck or blue clay, and for several rods around the pond where the water occasionally stood during wet seasons of the year. About four or five rods from the pond, and a short distance from the clay soil, where the ground was perfectly dry and sandy, I commenced digging a well about eight feet in diameter. After digging about two feet from the surface of the ground, the soil grew harder, and showed some indication of gravel, and continued to grow more hard and gravelly to the depth of six feet, where it grew more loose and gravelly; and continued to grow more loose and porous to the depth of twelve feet, when it began to cave, and was but little else than a stratum of loose stones and gravel. I then filled the well with large stones, loosely thrown in, and in order to prevent their falling too hard and packing too tightly on the bottom of the well, several posts were placed slantingly towards the bottom for the stones to roll against; and from the well I dug a ditch to the pond, deep enough for the water to run readily from the bottom of the pond. This was done in the afternoon, and the next morning the pond was perfectly empty of water, which the evening before was from one to four feet deep, and covering near three-fourths of an acre; thus in less than fifteen hours this immense quantity of water was discharged from the bottom of the well into the bowels of the earth. A ditch was then dug leading from the well through the centre of the pond, and stoned in the ordinary way of filling blind ditches, and the muck drawn out upon the high ground and mixed with the sandy soil of which the field is composed.

The ground has since remained perfectly dry and tillable, and bids fair to become more productive than any other part of the field. I am satisfied, from the success of this experiment, that most of the swamps, ponds and marshes which abound in our country, and are similarly surrounded by sandy soil, may be, with trifling expense, drained and made permanently dry in this expeditious manner. J. W. Seely.

Bainbridge, Chenango county, August, 1845.

BOMMER'S MANURE.

L. Tucker, Esq.—As I am a friend to the agricultural interests of the country, and wish its improvement and prosperity, I send this communication to you. I have lately purchased George Bommer's patent method of making manure, and from trial consider it very valuble, not only in the fabrication of manures, but also in its analyses of soils, and other interesting matter to the farmer. I have long thought the subject of agriculture had been greatly neglected, and am very glad this effort has been made to accelerate its interests. I would not be deprived of the aid of the knowledge contained in the method for five times what it cost me could I not regain it. I hope my fellow farmers throughout the country, who need manure for their farms will avail themselves of this useful method, which so cheaply and expeditiously converts the materials into this valuable article. Let us be awake to this subject, and we shall but little longer hear of short crops and worn out lands.

RALPH STORRS.

Mansfield, Ct., August 27th, 1845.

CANADA THISTLES.

MR. EDITOR—I fully agree with a writer in the July number of the Cultivator, that "prevention is better than cure." I have no doubt that old, deep-rooted patches of thistles may be subdued by constant and thorough plowing; but my plan is to save the trouble of a "cure." I know by my own experience, that any farm not already overrun with thistles, may, by a little work and contsant vigilance, be kept entirely clear.

In 1807, I came into possession of the farm I now occupy. There was not then any thistles on it, but a neighbor adjoining had at that time one lot very full of them. He took no pains to keep them down, except by ordinary plowing and cropping, and his farm at length became completely overrun with them. In every head-land and joint of fence they were from year to year suffered to run to seed. The consequence was, that my farm, which adjoins my neighbor's for half a mile, in a few years showed Canada thistles springing up in different places. I made up my mind to commence not a *Florida* war merely, but an interminable war on the base intruders.

Believing in the theory that the root is as much dependent for prosperity on the branch as the branch is on the root, I take a hoe, in the spring of the year when they first make their appearance, and just crop them off at the surface with one stroke, which a man can do and walk right along. I repeat the operation as often as the thistles appear, which may be three or four times in the season. I have frequently killed them in this way the first season, so that they have not appeared again in the same place; but if they should appear the next season they will look sickly, and by repeating the same process the second year they will be entirely subdued. But if, unfortunately, you have neighbors less faithful than yourself, you will be constantly annoyed with new cases which will require attention.

I have pursued this practice of cutting thistles with a hoe for nearly forty years; and although my neighbor's farm is now filled with them in every field, there has never been on mine in any one year more than a man could cut up with a hoe in ten minutes, provided they were standing in one spot. But they will spring up in some new places every year or two, requiring, like the maintenance of liberty, "eternal vigilance."

AN OLD FARMER.

Saratoga, August, 1845.

HOUSES OF UNBURNT BRICK.

MR. EDITOR—We have a method of building cheap good houses here of unburnt brick, of which I do not recollect that any notice has been taken in your paper, and which I think are admirably adapted to any part of the country. The plan is as follows:

First, find out some strong, adhesive clay—the stronger the better—throw up a quantity of it and mix in plenty of straw or sedge grass, cut about six inches long. Put in sufficient water to make a strong mortar, and tread with oxen or horses to a consistency to be made into brick. Mould them to any size you wish, from 18 inches by 9 to the size of common brick; they are generally moulded here as long as the wall is thick—say 18 by 9, and 6 inches thick. After being dried in the sun, like other brick, they are ready for building, and can be put up with either clay mortar, or lime mortar, as is convenient. Lime is of course the best. They should be built on good stone or oak sill foundation, 18 inches from the ground, and the eaves of the roof should project over 2 feet, to prevent the water lodging. The chimney can be built of the same material of a smaller size, except the fire place, and above the roof. The plaster is put on the wall without lathing, both inside and outside, it being usually rough cast. If five or six nails are driven into each brick to within half an inch of the head, they will prevent the rough cast from falling off, but it will stick close enough to the wall on the inside without. A frame is fitted on the wall where floors are wanted for the joists to fit into, if for good houses, but if for a cheap kind, simple two inch plank are laid on the wall, and the joists laid on them for the floor.

These houses are at once cheap and durable, being very warm in the winter and cool in summer, and always free from damp. Being generally frost-proof, flowering plants can be kept in them in the winter with the greatest ease. A friend of mine, a few miles from here, who formerly lived at Albany, Mr. John Holmes, has built a very good one of this kind, and he finds it all that he can desire a house to be. Mr. Ellsworth, of the Patent Office at Washington, has also built one.

J. B. BAGWELL.

Chinguacousey, Canada West, August, 1845.

POUDRETTE.

TO THE EDITOR OF THE CULTIVATOR—Having seen it stated by you in some of your papers, in answer to an enquiry in relation to Poudrette, that it is undoubtedly one of the best manures when properly made—but that the purchaser must trust to the honesty of the manufacturer for a good article—we beg leave to state two or three facts concerning ourselves, which will show that we have an *interest* in making a good article, and *prove* the fact that we *do not* adulterate our poudrette. In the first place, we have too much capital at stake to risk our reputation by making an article that would sell for but one season. Our buildings, vats, drying floors, with movable covers, which occupy more than an acre of ground, together with the vessels continually employed in the business, cost us more than $75,000. Secondly, we offer the following

AFFIDAVIT.—*State of New Jersey, Hudson County, ss.*—Charles F. Dodge, being duly sworn according to law, deposes and says, that he is now, and has been Agent and Superintendent for the Lodi Manufacturing Company, at their works on the Hackensack River, during the two last years, (1844 and 1845,) that he knows the materials of which every barrel of Poudrette has been made during that time, and that to his certain knowledge, no raw peat, turf, or meadow mud is now, or has been used, in the manufacture of their *New* and *Improved Poudrette*, and moreover, that *no street manure, pond dirt*, or *hard coal ashes*, or *any other hurtful* or *deteriorating* material has been or is now mixed in or with the article. That the cheapest material used in its manufacture, is an article answering exactly both in description and analysis to the celebrated "*Dutch Ashes*," which, as deponent is informed and believes, have been for many years a considerable article of commerce in Europe, being there considered a most *valuable* and *powerful fertilizer*. And deponent further saith, that the proportion of night soil to the other compounds, is not less than 60 per cent., and that no article is used which is not a good manure by itself; that all foreign substances, such as sand, &c., are separated as much as possible from the night soil, by a peculiar process;* *that no two kinds of Poudrette have ever been manufactured for sale;* that the proportions of the several ingredients are uniform and not varied from; that in its manufacture it is carefully protected from rains, snows, and dews, and that from the manner in which it is made, *it is next to impossible that one barrel should be better or worse than another.*

CHARLES F. DODGE, *Agt. and Supt. Lodi Man'g. Co.*

Sworn this 23d day of June, 1845, before me at Jersey City. J. D. MILLER, *Master in Chancery.*

Add the fact, that we are an old established and incorporated company; that we have survived every rival establishment; that we have greatly improved upon the European process of preparing Poudrette, and we leave your readers to judge whether we are not entitled to confidence, or at least to a *trial*.

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* It sometimes happens, that hard coal ashes are thrown into privies. In such cases it impossible to separate or screen *every* particle of hard coal from it—hence, small pieces, about the size of a pea, are occasionally found in the Poudrette.

Respectfully yours, A. DEY,
Pres't of the Lodi Man'g. Co., 50 Liberty-st., N. Y.
New-York, August 14, 1845.

BLACK SEA WHEAT.

MR. TUCKER—Having in several former numbers of the Cultivator, seen notices of the Black Sea Wheat, and learning that where it had been raised it was considered a valuable variety, I concluded to make a trial of it myself. Accordingly I last spring procured one bushel and a half for seed. This was sown the 24th of April on a little over an acre of ground. The crop I have just harvested, and for many years I have not had so good a one. The straw was bright, the heads long and remarkably well filled. Still I think it was somewhat injured by the drouth, as it was on dry land, and the season with us has been very dry. As many farmers in this vicinity have made no change of seed for many years, would it not be for their interest so to do? *I think I have found it so.* My wheat is not yet threshed, or I would give the number of bushels. In some pieces in this vicinity, a small worm has made serious depredations. Will you give the name? Have heard it from others, but not satisfied. It is about the eighth of an inch long, of an orange color, and it is found by the side of the kernel, or between the kernel and the hull.

In the last number of the Cultivator was a notice of a trial of the Centre Draft Plow. I have used this kind of plow several seasons, and believe that as yet, too much has not been said in its praise. In the beautiful work it performs, in the ease with which it is held, and in its lightness of draft, the farmer is sure of finding his reward.

Plainfield, Ms., Aug. 21, 1845. WM. N. FORD.

P. S. Any person wishing to procure the Black Sea Wheat for seed, can be supplied by the subscriber.

INDUSTRY AND ECONOMY.

L. TUCKER, Esq.—Several years ago, on a cold raw day in November, public business called me to the house and farm of Mr. DUDLEY CHASE, then and still residing in the town of Winchester, in this state. I was so highly pleased with the amount of labor performed in doors and out, with the help employed, that I then made memorandums of the same in writing, and think it worthy of a place in your very worthy agricultural journal. I have no doubt of the truth of what I state, although it may seem extraordinary. The work was none of it slighted, but was all, in doors and out, done in an excellent manner, and in due season.

They then lived in an old inconvenient house in the middle of their farm, and had no public road to the house, but have now a good convenient house, and a good road passing by it. Mr. C. was, as might be expected, a subscriber to the New England Farmer, published at Boston, perhaps the only agricultural periodical then published hereabouts. He had that year kept and milked 16 cows, and made 6,500 lbs. cheese, 450 lbs. butter, and fatted 2,700 lbs. pork, to aid in doing which, he bought a load of bran and 70 bushels of corn.

Mrs. Chase and a hired girl did the work in the house. They had three children, the oldest then four years old, and the youngest born the preceding August.

Mr. C., with the help of a boy 16 years old, had done all the work on the farm, raised 3 acres of corn and potatoes, made 16 rods of stone wall, got out his manure, made and got in his hay, collected materials for a large and convenient farm-house, and his year's wood; made 575 lbs. of maple sugar, of which he saved for his own use 30 lbs., and cleared on the rest over expenses of transportation, $59.20, and 2 galls. of molasses sold for $2.50. Sold 5,400 lbs. of his cheese for 8 cents a pound, and his calf-skins for $9.28. Collected the apples for 25 barrels of cider, carried them more than a mile to the mill and brought back the cider.

His team consisted of a singe horse and no more, and he used no other during the year, except to break up one acre of sward land for planting. And with that same horse, he went to market in trips from 7 to 53 miles out, each, amounting in the whole to 428 miles, and he thinks about the same distance in shorter trips.

He bought his farm on credit, but by the industry and economy, not parsimony, above described, had been enabled to pay for his farm, and furnish himself and family with all the comforts of life. My daughter drank tea at his house a few days ago, and informed me that every thing is managed as well as when I was there.

Lest it should be thought I have some interest in puffing a particular friend or connection, I can say, and say truly, that I never saw or heard of the man or any of his family, till the occasion first mentioned, nor have I now any connection with them or any more friendship for them than for any others, that by industry and good management, make themselves comfortable and respectable. Such folks I wish to encourage, and as far as in my power, present to others for example, and therefore hope you will not refuse this a place in the Cultivator.

C. BUTLER.

Plymouth, Conn., June 16, 1845.

THE TANNING PROCESS.

MR. EDITOR—Tanning is a chemical process, but I doubt whether it keeps pace with the present march of improvement in science and knowledge.

The following information would be of general utility to tanners in the south and west, to wit:—

1st. Is there any philosophical instrument to ascertain the strength of tan ooze, or the tanning liquor? If yea, what is it?

2nd. What is the strength of the first liquor the hides are put into? And what the strength of the last?

3d. Are there any improved tanning machines of late invention, and what is their utility? Who are the inventors, where do they live, &c., &c.?

4th. Is there no improved plan of scouring off the hair, cleansing the hide of the lime, &c.?

A SUBSCRIBER.

Livingston, Ala., July 29th, 1845.

In reference to the foregoing, we offer such information as we possess, hoping that others will more fully answer our correspondent's inquiries.

A new process of tanning was invented in England a few years ago, for which, we have been told, a patent was granted by the crown. About the year 1838, or '39, an Englishman then residing at Zanesville, Ohio, obtained letters patent from the United States government, for what we understood was the same process. The name of this man we cannot now recollect, but presume any information can be furnished in relation to him, or to the process of tanning, by Mr. JOSEPH STACY, of Zanesville. In *Johnson's Farmer's Encyclopedia*, a description is given of a new process of tanning, which we suppose to be the same as is above alluded to. The subjoined extract embraces the substance of the account:

"A discovery has recently been made, which seems likely to revolutionize the tanning trade. By means of a tanning machine, or pair of horizontal rollers, fixed over a tan-pit, between which is fixed a band or belt of hides attached by ligatures to each other, to the number of 50 to 100, and by which the rollers are constantly fed or supplied, the hides are lifted out of the pit on one side of the machine; as they pass between the rollers, the exhausted ooze or tanning liquid is pressed out of them, and they are deposited in folds in the pit on the other side, where they absorb another supply of fresh tannin. The first hide having been inserted between the rollers, the others follow in succession, and upon arriving at the end of the band, the motion of the roller is reversed, and the belt is returned through the machine to receive another squeeze. This alternating motion is constantly repeated, the pit being replenished from time to time with fresh solutions of tan, till the operation is completed. The effects produced by this simple plan, are—1. The shortening of the time of tanning to one fourth of that generally required. 2. The production of a considerable increase of weight. 3. The leather tanned by this method resists water longer than that tanned by the old process. 4. The new method is cheaper than the old. 5. It is applicable to the existing tan-yards, at a comparatively trifling expense, with a capability of working in rounds or series, and of expending less tan or liquor. 6. That it is available for all sorts of leather."

A SHOWER BATH.

FRIEND TUCKER—A great deal has been written and said, of the necessity of frequent ablution. It has often been shown by the most learned logic, that perfect health may not be expected by him who neglects to keep his skin *clean*, any more than him who neglects to keep his feet warm by exercise. And yet it is probable that not one person in a thousand in this country, expects to wash daily more than his face and hands. This is particularly true of the country, where water is in greatest plenty, and where from the nature of our occupation, it perhaps, is the most needed. How many a poor fellow after a hard days' work in the harvest field, has retired at night, wearing linen steeped in perspiration, and found that

—— "he's a ninny who supposes
That every bed's a bed of roses."

He rises in the morning uttering the almost universal complaint at this time of the year, "I am more tired than when I went to bed."

Now, if he could have stood for but one minute under a shower bath, and followed this by a brisk towel, and this with a clean night gown, how full his heart would have been of "blessings upon the man who invented sleep." He would have thought with the Irish poet,

"Still as I stretch each wearied limb,
I cast a grateful thought on him,
And wish him rest in heaven."

A certain correspondent of the Genesee Farmer once said "that hogs did not prefer to be *dirty*, but they wallowed in foul water because clean was not given to them."

Surely no one will say that men are less refined than hogs! The true reason for this apparent neglect, arises chiefly, in my opinion, from the want of a suitable washing *apparatus*. Bathing tubs are sometimes found in the dwellings of the rich, but these are costly, and require to have the water heated during the most of the year, for who but a regular disciple of Preissnitz would encounter, feet foremost, an ice bath in the winter! Seeing in an eastern paper, (the name I do not like to give lest I might be suspected of fanatical tendencies,) an advertisement of "Portable Shower Baths," we set our *wits* to work, to contrive a "Macedon Shower Bath." And though with much inward trembling lest the "rights" of the aforesaid advertisers be infringed, I will now proceed to describe the results of this mental exertion, in a simple and perfectly successful apparatus.

A sink is first made, two feet by two feet and a half, six inches deep, hollowing to an inch hole in the centre. This stands upon legs seven inches high. Four posts two inches square are raised upon the corners of the sink. Three of the sides are enclosed by muslin, nailed to the posts, and painted. The fourth side has a door covered by muslin as before. Across the top run two inch strips, two inches wide; in each of these two window pullies are fixed, one in the middle, and one near the end. So far the closet, now for the engine. This consists of a cylinder of tin, keg shaped, ten inches in diameter, and twenty-eight in length, with a small iron axis running through the *heads* one inch from the centre, and having gudgeons at either end. Now put blocks with cords attached, upon these gudgeons, and let the cords pass over the pullies, and the cylinder may be raised then either by a *crank* or weight.

The next thing will be to get the water in, and out. The reader will observe that by reason of the axis being at one side of the centre, the other side will always tend downward. Toward the top, as it hangs, cut out three sides of a parallelogram, that is, the two short sides, and the *lower* long one; bend *in* this piece of tin, perpendicular to the surface of the cylinder, and you have a hole for turning in water, four inches by twelve. The ends of the piece of tin must then be lengthened to the *heads* inside and soldered fast, making a tight partition four inches deep and twenty-eight long.

Now to get the water out. On the other side of the partition, and near it, describe a circle eight inches in diameter; punch this space full of holes, size one eighth of an inch. Solder a ring to the upper surface of the cylinder, and attach a cord three feet long thereto.

Are you ready for a bath? If so, let down the engine and pour in twelve to eighteen quarts of water, turn the crank until the cylinder has reached the top, and the clack holds it fast; step in and gently pull the string; the refreshing shower descends. Do you say "hold, enough?" let go the string, and the cylinder falls back by the unalterable laws of gravity; thus on till you are satisfied, and refreshed, not forgetting the rough towel, and polishing flannel at the last. W. R. S.

PRESERVATION OF CARROTS.

MR. TUCKER—In the Cultivator of last year, page 141, Mr. Henry Weston, of Indiana, says that carrots may safely be left in the ground during winter, like parsneps. This statement induced me to leave a few carrots in the ground last fall for the purpose of experiment. They were of the long orange variety. When dug, in the spring, the lower ends of them were sound, but the upper ends, for four or five inches, were soft and rotten. I conclude, therefore, that in *this climate*, it is not *always* safe to let carrots winter in the ground where they grow. Yet I have no doubt the experiment may sometimes be successful; and the same is true of turneps. I have seen excellent turneps pulled in April, from the ground where they grew the preceding year. The winter had been very severe. Snow fell in November, and remained on the ground until late in the succeeding April. The turneps, being covered during the *whole* winter with a thick coat of snow, were preserved from freezing. But when the top of the ground is subjected to alternate freezing and thawing, as is often the case during our winters, turneps left in the ground are soon spoiled, and carrots do not fare much better, judging from the result of last year's trial. A. R. M'CORD.

Lagrange Dutchess county, 1845.

THE BUTTON-WOOD TREE.

The sad fate of that noble shade tree, the Button-wood, (*Plantanus occidentalis*,) during the last four years, has attracted the attention and excited the sympathy of the admirers of nature.

When their early shoots were killed in the spring of 1840 or '41, it was generally conceded that early frosts were the cause, and I well remember that in this state we had, soon after their buds had expanded, a cold rain and *sleet*, covering the young leaves with icicles that "nipped the tender shoots" beyond recovery. Vegetation put forth again, but so late in the season that the wood had not time to mature and ripen before winter approached, and the young leaves were either killed or entered the ensuing spring sickly and weak. They again perished—the old tree suffering most; but sprouted out as before, late in the season, and again were too young, or had not sufficiently performed their office to withstand our severe winters. In many of the old trees life became entirely extinct, and all were more or less affected.

Some writers have assigned as the cause a disease or epidemic, and given, as an indication of it, instances in which the trunk of the tree has been affected—the bark in places turning brown and the sap ceasing to circulate. This, however, I conceive to be the *effect* rather than the *cause*. The appearance of the trunk and large branches has generally been healthy—remarkably so for trees that have so frequently been deprived of their foliage. The present spring being unusually dry and the mild weather approaching gradually, has favored these monarchs of the forest, and I am happy to observe a more healthy condition in those which have survived. It has been said that the button-wood is one of our hardiest forest trees, and therefore should not have suffered more than others by early frosts; but this may depend greatly on the particular state of each kind of tree when attacked. The willow and other early trees may by greater expansion of foliage have acquired more hardiness, whilst the oaks and such as are late in blooming may not have budded. But is the button-wood one of our *hardiest* forest trees? Its natural location is on the rich bottoms and shores of our large rivers in the middle and western states, while the oak, chestnut, &c., are found in high latitudes and on mountain sides where they brave the severer storms that there prevail.

The opinions I have thus ventured to express seem strongly confirmed by the account given of the *Plantanus occidentalis* in SELBY'S BRITISH FOREST TREES, and which I have not seen elsewhere noticed. After describing the tree, he says—"It is evident from the fatal effects produced by the severe spring frost in the month of May 1809, and by the severe winter of 1813 and 1814 that it is in reality of a more delicate constitution, and less able to bear the vicissitudes of our climate than the oriental plane. In the year and month first named a severe frost destroyed the tender shoots and leaves just then bursting from their envelopes, of most of the largest trees; and though some which were not killed by the first attack made an attempt to push again late in the season, the feeble shoots they emitted were again destroyed by an early autumnal frost; this sealed their doom, as nature was too much exhausted to make a successful effort the following spring, and they speedily died."

There are farther remarks by that distinguished author illustrative of the effects of severe frosts on these trees, most of which were destroyed by the severe winter of 1813 and '14, and they are now rare in England. I trust, however, that nature, always provident, will adapt them to the changes and vicissitudes of our climates and spare us this noble tree. Yours, A. S. ROBERTS.

Philadelphia, Sept. 8, 1845.

THE CENTER DRAFT PLOW.

MR. EDITOR—Professional business having taken me away, I was from home when your number for August reached my place of residence, or I should have noticed sooner the report of the committee on the trial of the Center-draft plow at Albany. As a young friend observed, when introduced for the first time to a newly married pair, he had been considering for some time which he would rather be, whether Mr. or Mrs. L., so I find it difficult to determine which most to admire, the subject of their report or the document itself, both being, in my estimation, master-pieces in their way. I have been in the constant practice of using the center-draft plow for eighteen months, but it will be as many years before I shall cease to talk of and admire it; and yet, I admit it is necessary to understand it before it can be thoroughly appreciated. As has been said, its operations are spade labor, and so are the results, amounting, I am fully borne out in declaring, to the difference of a profit and loss on a farm. To speak the truth, I could not keep my farm in proper cultivation without it, and this I say from practical experience; for since I have used it I am able to keep the weeds under, which I never could do with the cutting plow, the center-draft first breaking and pulverizing the furrow-slice, so as to shake out the weeds by their roots, thus causing the death of one half by exposure to the sun and air, and hurling to perdition the other half, into the bottom of the furrow, making manure of them.

After this, however, I must be permitted to make an observation, without the shadow of animadversion on the committee's report, but to point out an error in judgment regarding the *utility* of the dynamometer in the trial of plows at our meeting, save and except as to the simple fact of ascertaining the mere comparative quantum of draft. I may be singular in my opinion, perhaps, but I believe much injury and wrong judgment has arisen from its use; the committees on plowing being often led astray in their estimate of the *value* of a plow by its lightness of draught, without taking into account the cultivated and upturned state of the furrow-slice, so that the plow that cuts the land smoothly with its well-sharpened wing and point and coulter, and sets the furrow to an angle of 45° or even less, and passes on without breaking or disturbing a particle of it, is measured by the dynamometer against another, which *breaks without cutting*, and cultivates the earth, like the spade and rake, from the bottom to the top of the furrow, which can only be done by a resistance amounting to a great many pounds, perhaps in some instances to a hundred, over the mere cut-and-edge plow. To be sure, the plow that shall be found to pulverize the soil like the center-draught at an expense of resistance not greater than the Ransome, would be a remarkable implement; and thus I estimate the Prouty-plow, from data derived from the working of my teams, on which I can fully rely, it being seldom now that I see them turn a hair or quicken a breath in the labor of turning the stiffest soil, while formerly, they would be covered with foam. It has been computed that two horses in a center-draft plow are equal to three in almost every other; and this I go for, and a little more occasionally. D. C.

New Brunswick, N. J., 1845.

"SPARE THE BIRDS,"

Say a large host of scribes in the different agricultural papers. Though the birds destroy, mutilate, and defile the fruit, yet they also eat the *insects* which destroy the fruit. Hence we should spare the former on the principle of "setting a thief to catch a thief."

But this benevolence should be more expanded. The grubs and wire-worms, though they destroy the crops, also destroy the weeds which choke the crops; therefore "spare the grubs." Canada thistles, though they choke the crop, also choke mulleins, docks, and Johnswort, which injure the crop also; therefore, "spare the Canada thistles."

I am so heterodox as to differ from others. I am in favor of destroying *all* depredators that are proved to be such. If they happen to be *snakes*, destroy them; if they are *birds*, destroy them; if insects or noxious weeds, destroy them;—and then I have the privilege of disposing of the crop, as is most convenient. We must take care of our own crops and show no partiality to any intruders or thieves, however handsome their dress or fine their music. Let every one be judged by his actions. If a snake kills field mice, and does no injury himself in turn,—protect him;—if a "feathered songster," eats and defiles fruit, and does no good beside—destroy him. And however much good he may do in saving the farm or fruit crop from insects, if after it is thus saved, he appropriates it all to himself, he has forfeited protection.

There seems to be a sort of morbid humanity in favor of birds, because they are birds; true humanity should extend to all animals alike, which have feeling. Is it any greater merit to be a bird, than a toad, snake, or lizzard? Why must the snake be killed and the bird be spared, when both may be equally innocent or equally guilty? Whose fault is it that the toad is a toad; why then visit him with the blame of what he cannot help? He is not a free agent in this matter. A rogue should not escape if he has a handsome face, nor an innocent man be punished though hook-nosed and hump-backed. Let us discriminate. Some birds are our friends, and do us good; others are gross nuisances, let them be abated. X.

METHOD OF PRESERVING PORK.

MR. EDITOR—I am aware that much has been written on this subject, and also that the great mass will continue in the beaten track of their good old fathers, because they are unwilling to run any hazard, and I am fully satisfied that there is a great difference in cellars, some favorable to the preservation of meat, others unfavorable; and so of other articles. The method which I have adopted for two years past, has previously been practiced by some of my friends with complete success, where the common mode had often failed. I pack my pork the same day of killing, (even though it be not fairly cooled through,) in the common mode, except I use Turk's Island or rock salt. The same day I scald and skim my brine till it is perfectly pure, then boil and pour to my pork boiling hot. It penetrates at once equally, takes from it all stringy and tough qualities, renders it brittle, adds much to its flavor, and is the safest method I ever practiced. *Shoreham, Vt.* S. N. H.

The method of curing pork above described is new to us, and we should therefore be unwilling to ensure its success. If others have practiced it we should like to be informed of the results.—Ed.

REMEDY FOR RINGBONE.

Take half a pint of the best whale oil, and half a pound of best box raisins. Cut the raisins open and put them in the oil. Simmer both together (do not boil) till the raisins are hard and crispy. Apply the preparation to the ringbone once a day, rubbing it in well. It will last about two weeks, and one preparation will generally effect a cure. I tried this on a horse three years ago, that was quite lame; the bunch is still on his foot, but he has not been lame in the least degree since.

Eaton.

East Weare, Hillsboro county, N. H.

CONDENSED CORRESPONDENCE.

Carriage for Manure, &c.—"B. H." New Lisbon, describes a new vehicle for hauling manure, which he thinks of considerable importance, as follows:—"All that is required is three cross-pieces, 6½ or 7 feet long, pinned to the side scantling of a stone-boat, and planed bass or pine boards, 8 or 9 feet long should be nailed to them. They should be seasoned and matched, or made tight. The cross-pieces should be hollowing in the middle, from 6 to 10 inches; the one at the hind end of the stone-boat should be settled as low as possible; The forward piece should be raised from four to six inches. This gives a smooth surface of about sixty feet, and being hollowing in the middle, more can be placed upon it, and in unloading, the shovel more naturally tends towards the centre. For drawing and spreading any kind of manure, or old ashes, where the distance is not great, two men will do more with greater ease than three men can with any other kind of carriage."

Westchester County, N. Y.—Mr. Wells, of Croton, will receive our thanks for his good wishes and efforts to extend the circulation of the Cultivator in that county. Though he regrets the general want of enterprise and information among the farmers of that section, he says—"There are some who seem to manage upon principles, and appear ready to avail themselves of every suggestion, and to profit by the light which science is pouring on rural affairs. When you go over the county, you can readily tell which are the farms that have such owners. We might mention their names, and you would recognize them as standard subscribers to the Cultivator. But there is a population of 48,000 in the county, three-fourths of which, or more, are directly employed in agriculture, yet the mansions are few indeed where you can find an agricultural paper. This should not be." In reply to Mr. Wells's inquiry, we state that the number of our subscribers in Westchester county is 151.

Advantages of Agricultural Papers.—Mr. John S. Yeomans, of Columbia, Ct., says—"I have been a constant reader of the Cultivator from its commencement—took it for six years in company with a neighbor, working at that time as a mechanic and owning but a few acres of land. For the four years past have taken it myself—have purchased some more land, and am dabbling some at farming. I have always been prepossessed in favor of agricultural interests, and have often expressed the opinion that the intrinsic value of the real estate in our small town has been enhanced considerably in consequence of improvements in making manure and cultivating lands, which never would have been adopted but for the suggestions in the Cultivator."

Prevention of Smut.—I have been soaking my *seed wheat* in bluestone (sulphate of copper,)—1 lb. to 5 bushels, water enough to cover, leaving it in soak for about 24 hours and then rolling it in ashes, and have found this method a full preventive against *smut*. With the same effect I have tried for 5 bushels seed wheat, 1 lb. saltpetre, (nitrate potass,) 2 lbs. sulphate soda in crystals, (glauber salts,) 2 lbs. of copperas, (sulphate of iron,) and I never had smut in wheat when I used either of these preparations. *Laurens Dist., S. C.* W. B.

Large Fleece.—We have received an article signed "*Tityrus*," giving, in an extract from the Hartford Times of 28th June last, an account of the fleece of a Merino buck fifteen months old, belonging to Daniel Pinney, Esq., of East Windsor, Ct., from which was sheared on the 9th of June, *thirteen pounds and eight ounces* of wool "in good merchantable condition." "Tityrus" informs us that this remarkable animal was the produce of what is called close breeding—that is, breeding from near relations. The ewe which brought him is said to have been a full blood Merino, though it is unknown whether she was a "Pauler, Escurial, Nigretti, or Rambouillet." "Tityrus" informs us that—"This ewe was put to a ram that had carried his fleece two years without shedding his wool, and *his* fleece was about eight pounds. The produce of this union was a ram lamb, which at fourteen months old sheared *nine* pounds of wool. She was next put to this son of her's when he was only about seven months old, and her produce by him was *two* ram lambs, one of which is the famous buck that produced this enormous fleece of thirteen pounds and eight ounces of wool at his *first shearing!*" The weight of fleece, we think, exceeds by several pounds that of any other Merino buck of the same age that we have heard of.

Items.—We give the following items from a letter from G. M. Eichelberger, Frederick, Md.

"I am pleased to see that you suggest to Mr. Townsend the expediency of not extending the controversy relating to the transmutation of grain. Those who still adhere to the opinion that transmutation takes place, if they have read half what has been said in the Cultivator, and tried to think rationally on the subject, must be "bound to their idols," and "would not believe, though one rose from the dead" to assure them of its impossibility.

Mr. Eichelberger informs us that he planted last spring some Mercer potatoes which were procured from Baltimore, and were much affected with the dry rot or gangrene. He cut off most of the affected parts, but planted some a good deal rotted. "They were," he says, "a long time vegetating, and some few did not grow at all, but the rest grew finely, and if the drouth had not interfered I should have had a fine crop. I have dug them, and the quality is very fine. So far as I have discovered there is not a single particle of rot."

"In the spring of 1843 I made inquiry through your paper relative to damp walls of dwellings. In September or October following, I lined the walls with zinc, and covered it first with a pretty stiff wrapping paper, such as hardware merchants use for wrapping, and had the walls papered; up to this time no dampness has shown itself."

The fourth flowering of the Paulownia Imperialis.—The Revue Horticole thus describes this tree. "The parent of the splendid family of the Paulownia, which has been disseminated to every part of Europe, and also to America, has just flowered for the fourth time in the Garden of Plants, at Paris. Two hundred and twenty terminal clusters, each 15 to 16 inches in length, and comprising 20 to 30 flowers to each cluster, impart to the tree the appearance of a single magnificent bouquet of a light blue hue, and most charming effect. The tree is now 25 feet in height, and attains in Japan the height of 40 to 50 feet." The most attractive object in the nurseries of Wm R. Prince & Co., at Flushing, is a plot containing 500 trees of this species. which have attained 8 feet in height since the middle of May, with entire circular leaves, 20 inches in diameter. It was introduced by them in 1843, and has proved perfectly hardy; indeed more so than the Ailanthus and Catalpa.

Self-acting Pump.—A correspondent at Washington city, D. C., writes—"A very deep interest is felt here in relation to the Self-acting Pump, a communication upon the subject of which appeared in your last number. If it will perform what its inventor promises there will scarcely be any calculating its convenience in this southern country, where wells and cisterns are principally depended upon for water. I trust the public will hear more about it, as soon as propriety will permit.

I read the description of it, to an old acquaintance, a few days ago, who is a planter, and resides near the centre of the state of Mississippi. The self-acting pump he said, would be invaluable to him. He depends solely upon cisterns for water throughout the whole year. His cistern, from which he draws water for his family use, is about forty feet deep, and twenty feet in diameter. He fills it in the winter season, because the water then is not only colder, but is thought to be purer. No water is admitted during the warm weather. Like all others, accustomed to the use of cistern water, he thinks it the sweetest and best water that can be had, any where, any how—but could it not be much improved, in the way of filtering it, by means of a self acting pump?"

Center Draft and Subsoil Plows.—W. B., of Laurens District, S. C., writes concerning these implements as follows:—" I think myself bound to add to the many testimonials in favor of Prouty & Mears' plows. The subsoil plow I have used, and believe to be an implement of immense importance, at least in this section of country, where the ground is rarely plowed deeper than three inches, save by accident, and two inches is considered " pretty deep plowing." The self-sharpening plow is a noble farming tool, doing the work to perfection.

"A few persons of intellect and enterprise, who witnessed the performance of these plows, or were informed by me of the ease and nicety with which they work, have caused me to order several of them for experiment on their farms. I *believe* that the plows I obtained from Prouty, of Philadelphia, were the first of the kind ever brought here. I saw indeed one subsoil plow, at the farm of one of your correspondents, at Newberry, S. C., Mr. W. S., a gentleman of enterprise, and a scientific as well as practical farmer, but it was a clumsy affair, requiring a full team of horses, different in every respect to the plow of P. & M. I believe it was made after the pattern of the Deanston plow, and very *probably* Mr. W. S. was the first who brought a subsoil plow to South Carolina."

Farming in Canada.—Mr. J. B. Bagwell, near Toronto, says in reference to the rotation of crops practised in that neighborhood—

"Our general mode of farming here, is first a naked fallow, wheat, then oats, then peas with wheat or a fallow again, and so on in rotation with an occasional sowing down to clover. This is not a grazing part of the country, the land being more adapted to grain than grass. Our cattle are a mixture of Durham with the native stock; sheep principally of the Leicester breed, and hogs partly Berkshire with a pretty good sprinkling of the alligator and landpike breeds. The average clip of wool is from 4 to 5 lbs. of washed wool, and the average weight of hogs from 150 lbs. to 300. Mutton has in few instances been killed weighing 40 lbs. per quarter. But we cannot boast of the heavy weights of beef or pork that you do on your side of the lake."

Soaking Seeds in Ammonia.—A correspondent at Princeton, N. J., writes—"It may be of interest to some of your readers to give the result of an experiment in the way of soaking seeds. Last April, I soaked some oats in a solution of carbonate ammonia and gypsum, according to the mode prescribed by Mr. Campbell, of Scotland, as stated in the Cultivator The result was, at harvest, no perceptible difference from those by the side of them."

Blind Bridles.—" Why are blinders injurious to the horse?" Because they gather dirt and heat round the eyes. Dirt irritates the eye, and heat produces inflammation. Eyes were placed in the corner of the head that the horse might have the advantage of looking in different directions. Men, in the abundance of their imaginary wisdom, concluded the horse had too much sight, and they wished to curtail it; hence the origin of blind bridles. These so entrammel the eyes, that the horse is constantly compelled to strain them to see his way. This over exertion soon brings on disease.

INQUIRIES.

Orchard Grass.—H. C. (Jefferson co., N. Y.) This grass is the *Dactylis glomerata*. It is excellent for pasturage on tolerably dry soils. It makes very good hay, but matures too early for mixing with other grasses usually cultivated here. Another objection to its being sown in meadows, is the tendency it has to form *tussocks* which render the ground uneven, and prevent the scythe from running smoothly and closely. It is therefore most valuable for pasturage, and in this respect is superior to most grasses. It produces an abundance of long rich leaves, and starts very quick after being cropped or cut. Owing to the lightness and chaffy nature of the seed, a large quantity, not less than two bushels per acre, is required to seed the ground sufficiently to make a good sward of this variety. But little seed is produced in this country—the most of what is sown here being imported, which causes the price to be rather high. It may be had of Mr. Thorburn, of this city, at $2.50 per bushel; stated to be first rate article.

Cob-Mill.—A Subscriber, (Greenville C. H., S. C.) See the notice of Pitts' machine in this paper. Hussey's "Corn and Cob-Crusher," (see Cultivator vol. x, p. 19,) is well spoken of. We think it is for sale by Messrs. Sinclair & Co., Baltimore, Md. Messrs. Sinclair & Co., have also a mill for grinding corn (without cob) into meal, (see page 17 of current vol. Cultivator,) to be used on plantations, &c., that would probably answer the wants of " A Subscriber."

Foot-rot.—R. H. G. (Blenheim, N. Y.) In the Sept. No., you will find some good directions for this disease, in an article signed " Grazier." It is true the writer denies the propriety of calling the disease the " foot rot," but his treatment is no doubt beneficial in effecting a cure. Wash the foot well in soap-suds, and then apply a solution of blue vitriol (sulphate of copper) or some other caustic substance which will kill the *seeds* of the disease. Keep them on clean dry land.

Root-claw.—A. M. (Salisbury, Ct.) Perhaps you had better send to Boston for a root-claw or "root-puller," such as was alluded to on page 286, last No. It will serve as a pattern from which you can make others. This will be better than any description we can give of the tool, as we have no cut of it. We presume they can be had of Breck & Co., Ruggles, Nourse & Mason, or Prouty & Co., Boston.

Threshing Machines.—M. L. B. (Salisbury, N. C.) There are so many kinds of threshing machines in use that it is not easy to tell which is best. Pitts', Burralls, Hall's, Warren's, Taplin's, &c., each have their advantages. Hall's horse-power with Pitts' separator, described in our last vol., page 344, is highly approved. It is made and sold by Joseph Hall, Rochester, N. Y. A. Wheeler and Brothers, Chatham 4 Corners, Columbia co., N. Y., also make various kinds of threshing machines, and we bellieve most of the approved kinds may be had of J. Plant, successor to L. Bostwick & Co., 5 Burling Slip, New York. We are unable to give prices—they vary according to size from $120 to $300.

Harvesting Machine.—Hussey's and McCormic's machines are good ones, if we can credit the accounts of them. Messrs. R. Sinclair & Co., Baltimore, Md., would be able to give all information concerning them.

Straw Cutter for horse-power.—Hovey's largest size, price $30, is no doubt a first rate machine of this kind.

China Pigs.—T. D., (Louisville, Ky.) We know of no pure bred China pigs. The catalogue wanted shall be sent you. Accept our thanks for the interest you have taken in the Cultivator, an additional eight copies of which have been sent you.

Lucerne.—A loamy, not clayey soil, is most favorable to lucerne; but if it can be made to stand well and get through the first year, it will do pretty well on one that is more compact. Great care should be taken to keep it from being overrun with weeds the first summer, and to prevent this it is perhaps better to sow it with a machine, in drills, say eight or ten inches apart, and keep the spaces clean with the hoe.

THE CULTIVATOR.

ALBANY, OCTOBER, 1845.

TO CORRESPONDENTS.

Communications have been received during the past month from W. R. S., D. Gould, Solon Robinson, W. R. Smith, L. A. Moody, J. G. Bagwell, A Subscriber, Ralph Storrs, W. R. Prince, D. G. Mitchell, A. R. M'Cord, A. S. Roberts, J. P. Norton, D. C., A. L. Bingham, Asher Tyler, Tityrus, H. T. C., S. Weller, Henry Brewer, A Farmer, Grazier, Za. Drummond, Investigation, Farmer C., A Farmer of Chenango, Berkshire, An Amateur.

G. B. Frederick, Md.—Shall be glad to receive the communication on the subject to which you allude.

☞ Two "Challenges" have been received which we cannot publish except as advertisements.

☞ A notice of the agricultural exhibition at Troy, is unavoidably postponed till our next.

MONTHLY NOTICES.

Part IV. of Mr. Colman's European Tour, will be issued early in this month.

☞ Gentlemen having stock of any kind for sale, will please take notice that our advertising columns are open to them; and that we wish to avoid, as far as possible, the publication of communications intended mainly as advertisements.

Seedling Peach.—Mr. **James H. Watts**, of Rochester, has sent us a specimen of peaches produced by a tree which came up in his garden. It resembles the *Melocoton*. It is of good size, very juicy, and of fine rich flavor—well worthy of cultivation.

☞ Our friend E. E. T., of Painted-Post, has our grateful thanks for his high opinion of the Cultivator, and our efforts to advance the improvement of agriculture. We trust our paper will continue to merit his approbation.

Worcester Cattle Show.—This show is to be held on the 9th inst., when Mr. W. Cushman will, as he informs us, offer for sale, a variety of improved stock, consisting of cattle, sheep and pigs.

Sales of Stock.—Besides the sales of stock which were negotiated at the State Fair, several purchases have recently been made in this neighborhood. R. H. **Green**, Esq., of Winslow, Maine, has purchased the famous bull *Fairfax*. This animal together with two cows purchased of Mr. **Prentice**, have just left here via rail road for Mr. Green's fine farm on the Kennebec, where, should they arrive without accident, they will prove an acquisition of great value to the vicinity. Fairfax is well known and generally esteemed one of the best Durham bulls in the country. In 1842, being then two years old, he received the first premium for bulls of that age at the show of the New York State Society. His condition and appearance is now fine, and we think he will be likely to make such a *sensation* among the "down easters" as no animal has before done.

Mr. **Vail**, of Troy, has also lately disposed of a fine bull calf to Col. **Hampton** of South Carolina. The calf is the progeny of Mr. V.'s last imported cow, purchased of **Thos. Bates**, Esq., of Yorkshire, England, and the prize bull Meteor. The price paid for this fine calf is $300.

Advertisements.—We invite attention to our advertising department. It will be seen that Mr. **Comstock**, late editor of the Central New York Farmer, is now opening an extensive Agricultural Warehouse in this city. Such an establishment has been long wanted here, and we are pleased to learn that it has been undertaken by one so well qualified by his practical knowledge of the business, to give satisfaction to the public.——Gentlemen who contemplate removing to Virginia, will not fail to notice the sale of Farms in Loudon county, to take place on the 25th inst.——Horticulturists at the South, will do well to notice Mr. **Weller**'s advertisement, whose list of fine native Grapes we presume is equal at least to that of any other establishment in the country. We find it impossible to give his communication this month.——The attention of our readers is particularly called to the notice of the "Rensselaer Institute," one of the most valuable schools for young men in the State.——Wool growers are referred to the advertisement of "Fine Wooled Bucks," as an opportunity is afforded to procure several, at reasonable prices.

Virginia Agricultural Societies—We are happy to observe various indications of the improvement of agriculture in the "Old Dominion." Agricultural Societies are becoming organized in different parts of the state, which under proper management cannot fail to prove beneficial. We learn that a society has lately been formed under very favorable auspices, in Berkley county. One of the resolutions adopted at a late meeting was to authorize the Executive Committee to subscribe for the *Farmer's Library*, the *Albany Cultivator*, the *American Farmer*, and the *Richmond Southern Planter*.

Fine Wool.—We have received samples of wool from the noted flock of Messrs. **Perkins & Brown**, of Akron, Ohio. This flock has been got up by Mr. Brown, who several years ago, as we are informed, procured "the best sheep from the best flocks in the United States." The samples of wool sent are certainly very fine, and we are informed that it commands the highest price from the manufacturer. It is stated that the "average price for his whole lot has been 68 cts. per lb., and that he gets about 3 lbs. of wool per head." It is also stated that "he has succeeded to a great extent in breeding *gum* out of his flock, and is now aiming to obliterate horns, neither of which evils, are believed to be necessary concomitants of fine wool."

American Institute.—The annual exhibition of this institution, will be opened on the 6th of October, at its old rooms at Niblo's. The opening Address will be delivered on the evening of the 7th. On the 8th, the Annual Convention of Farmers, Gardeners and Silk Culturists, will be held at the Repository of the Institute, in the Park, at 10½ o'clock. An Address on Agriculture, by Hon. George Lunt, of Newburyport, Mass., in the evening. On the 14th, the Annual Plowing and Spading Matches. Cattle Show on the 15th and 16th, terminating with an Address, on the last day. Anniversary Address, by Hon. T. D. Elliott, on the evening of the 17th.

Relief for Choked Cattle.—We spoke not long since of the use of a *tarred rope*, for removing obstructions in the gullet of cattle. The first man we ever knew make use of the article was **Paine Wingate**, of Hallowell, Maine. He has used it for thirty years, both for himself and neighbors, and has in no instance failed in relieving the animal without occasioning the least injury. A description of this rope, as given by a writer in the Maine Cultivator, may be useful to those who have not yet provided themselves with it. It is 6 feet long and 1¼ inch through, (or three and three-fourths inches round) Three inches of one end is picked apart so as to make it soft to the throat, and wound with twine or spun yarn. Any rigger of vessels can make one. The writer states that from the end of the nose of a middling sized cow to the inlet of the stomach, is about five feet—there being seldom a variation of but a few inches from that. When the rope is used in winter, the writer recommends that it be dipped in warm water to make it pliable—in summer it may be dipped in water either cold or warm.

Peach Worm.—A cultivator of the peach in New Jersey, stated at the New-York Farmers' Club, that a sharp penknife, or a sharp wire, was the best preventive for the worm. The insect insinuates itself under the *bark* of the tree, where ordinary poisonous applications will not reach it. He had set out fifty thousand trees, and had cut out with his penknife thousands of the insects.

THE STATE FAIR AT UTICA.

The extraordinary interest which for a few years past has attended our State Agricultural Fairs, was fully kept up by the exhibition at Utica. Taken as a whole, there appears to have been no diminution in the superb display of agricultural products, in the vast collection of farm implements, and in the multitude of fine domestic animals, of all kinds and classes, which add so much to the attraction and great utility of these truly noble exhibitions.

The number of persons in attendance could not have been less than forty thousand; and among the distinguished individuals present, were many from a large portion of the other states of the Union, from Maine to Mississippi, evincing, by the pains they had taken to witness the exhibition, the high estimation with which such scenes are regarded.

The ground selected was about one mile south of the city, about ten acres of which were inclosed by a high temporary board fence, and within this boundary all the vast multitude of objects constituting the exhibition were collected.

The grounds, which were of an oval shape, were entered by three carriage and three foot entrances, and so great was the concourse, that these were hardly sufficient a part of the time, for the ingress of the spectators. Next to the boundary fence, within, a broad carriage road extended the whole distance round; and within this, with the exception of the front side, was a continuous and parallel row of posts for cattle. Parallel with this row of posts, and still further within, were the lines of pens for sheep, swine, calves, &c. The central portion of the grounds, consisting of about seven acres, were occupied with four temporary buildings, each 100 feet by 30; by the various agricultural implements, tents, &c. Directly in front of the principal entrance, and about ten rods within, was the first of these buildings, inscribed "FLORAL HALL," occupied with flowers, fruits and vegetables. The decorations and arrangement of this building, were much superior to any thing of the kind yet exhibited at our state fairs; and for this superiority, the society are indebted to the labor, taste, and skill of Dr. Alexander Thompson, of Aurora, Cayuga county. A neat and beantiful evergreen sylvan temple was erected in front of the hall, while the entrance of the hall itself was richly decorated with appropriate ornaments and inscriptions. A double series of terraced shelves, about ten feet high, extended through the center of the hall, and were densely filled with the articles exhibited, broad aisles for the passage of the spectators being left on either side. Three beautiful evergreen temples were situated within the hall, one in the middle and one at each end of the series of shelves which extended through the middle. The first, directly within the entrance, inscribed "Ceres," was devoted to the exhibition of vegetables in connexion with the adjoining pyramid of shelves; the central temple, with a chaplet inscribed "Flora," in the richest gothic style, and wholly covered with dense evergreens, bordered the rich and brilliant display of flowers. From this to the further extreme end, extended terraced tables loaded with fruits, and terminated by the temple dedicated to "Pomona." Among the contributors to the decorations of this hall, were Frederick Boice, of Utica, who presented an extensive collection of green-house plants; S. D. Childs, of the same place, with some splendid specimens of house plants; and Prof. Jackson, of Schenectady, with a fine and rare collection. Ellwanger & Barry, of Rochester, also contributed largely; and many of the citizens of Utica and the vicinity showed a praiseworthy liberality, taste, and public spirit in furnishing many small collections. Among the contributors to the fruits, were 39 select varieties of American and European pears, and an extensive variety of apples from David Thomas, of Cayuga county; a large assortment of apples and pears from Ellwanger & Barry, of Rochester; an extensive and miscellaneous collection of fruits from N. Godsell, of Greece, Monroe county; large collections of apples were also presented by J. C. Hastings, Utica; Judge Phelps, Canandaigua; Pliny Case, of ——; H. N. Cary, Marcy; and T. H. Hyatt, of Rochester. A very fine and valuable collection of pears was presented by Wm. Kenrick of Newton, near Boston. Very fine specimens of Coe's Golden drop plums were exhibited by Henry Green, by Ward Hunt, and by N. Devereaux, of Utica. Fine specimens of grapes were contributed by H. N. Langworthy, of Rochester, by S. D. Childs, and by Wm. Mervine, of Utica. The whole exhibition of fruits was smaller than the two previous years, but under the disadvantages of the general injury by frosts, was highly creditable the present year. It was quite remarkable, however, that with the exception of W. Kenrick, of Boston, there was scarcely a contributor east of Utica. What has become of our North River and Long Island friends?

Among the contributions to the vegetable collection, were fine specimens from Dr. Brigham, of the State Lunatic Asylum; G. S. Dana and D. Gray, of Utica; C. Schuyler, New Hartford; H. N. Langworthy, Rochester; and H. G. Dickerson, Lyons, who presented fine specimens of the sweet potatoe, raised in his own garden.

The second building, directly to the right of "*Floral Hall,*" and inscribed "LADIES' HALL," was devoted chiefly to domestic manufactures. A large range of tables extended through the centre, for exhibited articles, leaving broad passages each side for spectators. One half of this line of tables was covered with glass cases, for securing from dust the more delicate articles. This part of the exhibition, though highly interesting, was not equal to that of last year. It would, however, be difficult to enumerate the multitude of beautiful articles for use and ornament, including raw and manufactured silk, shell work, embroidery, and the more useful and substantial fabrics in the shape of carpets, coverlets, shawls, rugs, and the various articles of clothing, many of them evincing great skill in manufacture. There was a case of interesting specimens of ingenuity of various sorts, from the State Lunatic Asylum.

The third building, directly back of the "*Ladies' Hall,*" and designated as "MECHANIC'S HALL," was entirely lined on one side by very extensive collections of cooking stoves, from various contributors. On the opposite side were fine specimens of stone and earthen ware, glass ware, and a large number of domestic machines, as churns, washing machines, cheese-presses, &c. A braid-weaving, a stocking-weaving, and a calculating machine, were in constant operation.

The further building on the left, known as "FARMERS' HALL," contained a very fine and extensive collection of cheese, covering closely the long tables of one entire side of this hall, from a host of contributors, the whole amounting to many tons in weight, and affording a display we have rarely seen equalled. This building also contained fine specimens of butter, flour, and salt; several interesting and useful domestic machines; highly finished farm implements; bee-hives with bees at work, &c., &c. But one of the most creditable parts of the exhibition was the maple sugar, several specimens of which fairly rivalled in whiteness of color and purity the best refined loaf sugar. Among the best we noticed were those from Joel Woodworth, of Watertown, and Moses Eames, of Rutland, Jefferson county, and Wm. E. White, of Walton, Delaware county.

The exhibition of *Farm Implements and Machines* was excellent, and included a fine collection of plows—common and subsoil—fanning mills, horse rakes, harrows, gang-plows, seed sowing machines and coverers, reaping machines, horse powers, straw-cutters, cob-crushers and grinders, hurdle fences, improved gates, &c., for a particular enumeration of which see the awards of the committees on implements and on miscellaneous articles, in another part of this paper.

The Trial of Plows took place on the 16th inst., on grounds two miles south of the city. Experiments were at first attempted to test the strength of draught required for the several plows, by means of a windlass in connexion with the dynamometer. But although from the slower motion thus given to the plow the work could be more closely and leisurely inspected as it advanced, yet as there must always be the same variation from inequalities in depth, width, and toughness of the soil, which are as hard to overcome by this as by any other mode of plowing, no material advantage could in any way be obtained. Indeed, it was found that the rapid passage, by means of a team, through these inequalities, enabled the observer to judge of the mean or average pressure exerted on the rapidly vibrating index of the dynamometer, by presenting this average more immediately at the same moment to the eye, than when these variations were of longer continuance. The several plows entered were carefully tried by the dynamometer in the usual way, for the result of which the reader is referred to the report of the committee soon to be published.

As these experiments were performed only in sward ground, the result can only have reference to the comparative merits of plows for such ground. A thorough trial for all kinds of soil, whether heavy or light, with a sward, stubble, or mellowed surface, must be reserved for other occasions than State fairs, where the hurry from the shortness of time, and the confusion from the constantly intruding crowd, almost wholly preclude the possibility of strict accuracy. Different qualities in plows, and a difference in setting, if not entirely different plows, are needed for different soils and purposes—a day is needed for each plow, for full trial for all these different qualities and purposes. The proper decision of such questions as this is of the highest importance, involving not merely the success or failure of a few manufacturers, but in a greater or less degree the success of thousands and tens of thousands of our farmers, whose purchases are largely influenced by such decisions, and to whom an aggregate of hundreds of thousands may be yearly saved by a selection of the very best and most easily running implement, which may do the most work at the least expense to the flesh and strength of the team.

Compared with the previous year, the show of animals was generally more extensive at Utica. The whole number of horses, cattle, sheep, and swine is stated to have been 683, which are enumerated as follows:—114 horses—viz., 28 stallions, 36 matched horses, 7 geldings, 32 mares and colts:—274 horned cattle, being 48 Durhams, 11 Herefords, 9 Devons, 4 Ayrshires, 21 Natives, 124 oxen, 12 steers, and 8 fat cattle. Sheep, 64 Long-wooled, 112 Middle-wooled, 58 Merinos, 23 Saxons. Swine, of all breeds, 34.

There were many more horses at Utica than at Poughkeepsie, though we think the proportion of fine ones was in favor of Poughkeepsie. The show of Durham cattle did not embrace so many animals of the first quality as were at Poughkeepsie. And in this department we think the show compared less favorably with former ones than in any other respect. It is true there were some fine Durhams at Utica; but with the exception of some half-dozen animals, it would have been an easy matter for many neighborhoods we could mention, to make at any time a better display of this description of stock. In Durham cows and heifers the show was particularly deficient. We mention this not in the spirit of fault-finding, but in the hope of bringing out a better representation another year, which we know the state is abundantly capable of doing. We have not space to particularize, but noticed fine animals in this class from the herds of Messrs. Sherwood, Vail, Prentice, and Bell.

The Herefords were about the same in numbers and quality as at the last year's show. Of the eleven head shown, nine were offered by Mr. Corning of this city, and the other two, offered by Mr. Hyatt of Rochester, were derived from the same stock. The Devons made a very pretty show, and there were among them some fine animals which were much admired. We were pleased to see so many of this breed, and of so good a quality, for it is undoubtedly a race well suited to many sections of the country. In Ayrshires there was no competition—Mr. Bement being allowed to sweep the board in this class. Of grades, there was a long array, and we noticed among them many apparently good and useful animals,—particularly some Durham and Native heifers offered by Mr. J. B. Nott, and a young cow of the Devon and Native, by Mr. Washbon.

Of Natives we thought the exhibition decidedly inferior to last year. We must confess we think the practice of giving premiums for such stock as most of that which was shown in this class, appears to us as not likely to encourage improvement.

The fat cattle embraced but few animals, but among them were two or three of great excellence, considering the time and opportunity they have had to become fat. The show of working cattle may be said to have been a decided improvement on the last year. There were two teams of ten yoke each offered for premium, one of which was owned by Messrs. Wadsworth, of Geneseo, and the other was from various individuals of the town of New Hartford. Several yoke were presented for trial, some of which were excellent cattle, and would have done credit to any exhibition in any part of the country --not excepting the far-famed county of Worcester, Massachusetts.

In sheep, the show was upon the whole perhaps equal to last year. In long-wooled breeds the competition was not numerous, but we noticed some fine bucks and ewes. In South Downs the competition was principally between Messrs. McIntyre, Sherwood, and Wakeman. Among the Saxons shown were some of very fine fleece, but we were sorry to see the competition in this class so limited. Among the Merinoes we observed some good specimens. All those offered from out of the state came from Litchfield county, Connecticut. Messrs. Blakesly, Nettleton, and Atwood, offered excellent Merinoes, and Mr. N. B. Smith some fine mixed Merinoes and Saxons.

The swine department was not as well filled as last year. We noticed good animals of the Berkshire and Leicester breeds, from Col. Sherwood and Mr. Nichols, and some very pretty pigs of the Suffolk, and Suffolk and Middlesex breeds, which were brought from Vermont, owned by Wm. Stickney, Esq., of Boston.

The poultry department was well filled; embracing a numerous display of the various fancy and favorite kinds of geese, ducks, turkies, barn-door fowls, (hens,) and pigeons. No part of the grand exhibition attracted more attention than this. From morning till night the coops and cages were constantly thronged with men, women, and children.

Much inconvenience was experienced at the plowing-match, in consequence of the ground to be plowed being in three separate and detached lots, two of which were nearly a quarter of a mile apart. Sixteen teams, of a pair of horses each, contested for the premiums. The work was generally well done, yet there were a few who considerably excelled the rest. The ground was not of a character to make the smoothest work, especially where the plowing was as deep as required by the committee, that is, seven inches. This was owing to the abundance of small stones with which the plow came in contact towards the bottom of the furrow.

Stump Machine.—A machine which excited much attention, was Norcross' Patent Stump Machine, exhibited by E. P. Evans, of Lodi, Cattaraugus county, N. Y. It consisted substantially, of a large tripod frame, surmounted by a cap resembling an inverted potash kettle. Through this cap a large wooden screw passed, and was turned by means of a large lever 15 ft. long, by a horse attached to its outward extremity. The lower end of the screw was fastened by a huge chain to the stump to be extracted. The horse, walking round, exerted by a combined action of the lever and screw, a force 400 times as great as his own strength, (not estimating friction,) which would withdraw an ordinary stump with great ease. A large and very tough oak tree, three feet in diameter, standing on the show ground, was cut down on the last day of the fair for the trial of this machine. The experiment, which was witnessed by a vast concourse, was unhappily unsuccessful, not apparently from a want of efficiency in the machine, but from the basal frame having been hastily made of *soft wood*, merely for exhibition and not for use, the proprietor not having had sufficient time to procure better. A considerable portion of the stump in question was torn out before the machine gave way. We were assured by different individuals, that from 20 to 50 pine stumps had been extracted with this machine in a day, usually about 25. Its simplicity and cheapness are certainly strong recommendations, a machine with farm right, being only 75 dollars, the actual cost of making being much less.

Nothing of the kind could be more interesting at the next State Fair, than a full practical exhibition of the different stump machines, which have been already in use in this state. This might be effected by offering a suitable and special premium for this purpose; and by the selection of a stumpy field,—or a stumpy field might be easily manufactured for the occasion by cutting down a few trees, of which this country always affords an abundance. Cultivation in a very large portion of this state, perhaps in a large majority of its territory, is greatly impeded by the almost indestructible pine stumps which thickly cover the fields; and it becomes a matter worthy of suggestion to the State Agricultural Society, whether the offer of 40 or 50 dollars as a premium for the best and most useful machine for the removal of these impediments, would not be as useful, as for the same amount in premiums for the best plows, especially as much attention comparatively has been given to the latter, and little to the former.

HUSSEY'S REAPING MACHINE.—This most valuable machine was exhibited by Mr. Hussey at the late show at Utica. We have never yet had the pleasure of seeing this implement in operation, but we are acquainted with several farmers who have been in the practice of using them, and without an exception they speak of it in the very highest terms. All represent it as gathering the grain very clean, making a great saving in this particular over any other mode of harvesting. The operation of the machine requires but one man and a boy, in addition to two horses to draw it, and with this force it will cut in the most perfect manner an average of fifteen acres a day. To bind the grain as fast as the machine cuts it, requires generally eight men. The machine has been much simplified in its construction within the last year or two. It is not liable to get out of order, and will often work through the whole season without the knives being sharpened. Mr. Hussey received from the Society a gratuity of $15, as some compensation for the trouble taken to give the public an opportunity to examine this valuable machine. The price is from $100 to $170, according to size and the quantity of work they will perform.

On the afternoon of the last day of the Fair, the assembled thousands gathered round the temporary platform erected on the grounds, to hear the Annual Address from JOSIAH QUINCY, Jr., Esq., of Massachusetts. This address was eminently worthy of the occasion. Without the slightest aim at lofty eloquence, its arguments in favor of the superiority of agricultural occupation, over the fretful and feverish life of speculation and ambition, were powerful, convincing, overwhelming. It was "without art, graceful—without effort, strong." We scarcely ever heard any thing of the kind, so truly valuable and appropriate for such an occasion.

After the address the reports of the various awarding committees were read from the stand.

A very interesting appendage to the Fair, during the three days of its continuance, was the exhibition of MORSE'S MAGNETIC TELEGRAPH. Wires were run upon the roofs of the houses from the lower part of the city, to a building erected for the purpose on the show grounds, a distance of a mile and a half, and between these two points, a constant interchange of messages was kept up by the galvanic fluid. To those who had never before an opportunity of witnessing the operation of this wonderful invention, which is almost a *literal* fulfilment of Pollock's figurative lines, "He wove his garland of the lightning's wing, in sportive twist," it was a matter of thrilling interest, to see a man with a pen a mile and a half long, and with the electric fluid as his ink, tracing characters instantaneously, and as distinctly legible as those on which the eyes of the reader are now fixed. Specimens of the writing, executed on the spot, were distributed to many of the visitors.

The following resolutions were adopted at the close of the able address delivered by Mr. Quincy. Hon. John A. King offered the following resolution, which was unanimously adopted:

Resolved, That the New York State Agricultural Society are under great obligation to Hon. JOSIAH QUINCY, Jr. for the able and eloquent address this day delivered to the Farmers of New York, and that he be requested to furnish the Society with a copy of the same for publication in the Transactions of the Society.

On motion of H. S. Randall, of Courtland county,

Resolved, That the Society are indebted to the Mayor and citizens of Utica for their spirit and liberality in carrying out all the preparatory arrangements for the State Fair, and their hospitality in receiving and entertaining the immense multitude, who could not be accommodated in the hotels.

Resolved, That we tender our thanks to the ladies and gentlemen of Utica, who gave us their aid and exertions in preparing and arranging the halls of exhibition on the show ground.

Resolved, That we tender the thanks of the Society to Dr. ALEXANDER THOMPSON, of Aurora, for his unrequited services preparatory to and during the Fair, in the direction and arrangements of Floral Hall, the designs and decorations of which elicited the universal admiration of the thousands in attendance at the Fair.

Resolved, That the Society take great pleasure in testifying to the unremitted efforts of T. S. FAXTON, J. BUTTERFIELD, and the citizens of Utica generally, in carrying out most successfully the pledge given by the gentlemen named, on behalf of the citizens.

Resolved, That we tender the thanks of the Society to P. V. KELLOG, Sheriff, and to his deputy Mr. JOHNSON, and the others in his employ, for the admirable arrangements by which complete order was preserved on the ground.

Resolved, That the thanks of the Society are justly due and most cordially tendered to the officers and superintendents of the several rail road companies from Albany and Troy to Buffalo, for their liberality in transporting animals for the Fair free of charge, and visitors at reduced prices. B. P. JOHNSON, *Pres't.*

L. TUCKER, *Sec'y.*

RECEIPTS.—The receipts for memberships and admissions at the Fair, including a donation of $25 from Hon. Francis Granger, of Canandaigua, amounted to about $4,300, being $650 more than received at any previous exhibition.

EGYPTIAN OR EMIR BARLEY.

In the report of Mr. ELLSWORTH, for 1844, mention is made of what is called the "Emir or wheat barley." It is said to have been raised in Lancaster county, Pa. According to the description—"the straw of the grain is similar to that of the common barley, with the same formed ear externally; but it is not attached to the grain, that being formed like wheat, of course without husks, and this is the cause of its great weight, which is about sixty pounds to the bushel. Its growth is precisely similar to spring barley, requires to be sown at the same time, and used for the same purposes; and thus far has succeeded quite as well as the common barley."

Our correspondent, W. B., of Lauren District, S. C., is very anxious to obtain some of this kind of barley. He has formerly had it, but lost the seed by having suspended farming for a few years, and removing to another district. He says, "I am fully satisfied from the trials I have made that it will produce from 30 to 50 bushels per acre, and that our soil and climate suit it. It will bear stable manure, whereas the increased application of that article to wheat, invariably tends to throw it into straw, and causes it to lodge." He offers "FIVE DOLLARS for one bushel of it, delivered at any seaport in the U. S., so that it can be shipped to Charleston, S. C."

We cannot see, from the description, how this barley differs from the "naked or bald barley," which has been more or less known in the country for several years.

MARKING SHEEP.—The best paint is *dry Venetian* red. It combines with the oil of the wool and is indelible. A thief stole 25 from me and tried his best to cover up the mark with tar. But it would not do—the guilty blush was there.—*Solon Robinson.*

LIST OF PREMIUMS

Awarded at the New-York State Fair, Utica, Sept. 1845.

DURHAM CATTLE.

Bulls.—1st. To E. P. Prentice, Albany, "O'Connell," $15—2d. J. M. Sherwood, Auburn, "Arrow," $10—3d. Geo. Vail, Troy, "Symmetry," Diploma.

Specially commended.—Mr. Crosby's bull "Osceola," the bull "Young Echo," Mr. Talcott's "Cortes," and Mr. Doolittle's "Mohawk Chief."

Two year olds.—1st. To Bell & Morris, Morrisania, "Marius," $10. No others in this class deemed worthy of a premium.

Yearlings.—1st. To W. W. Ballard, Southport, "Victor," $10—2d. Geo. Brinkerhoff, Albany, "Peter Parley," Colman's Tour—3d. Horatio N. Carey, Marcy, "Oregon," Diploma.

Bull Calves.—1st. To Z. B. Wakeman, Herkimer, "Meteor," Col. Tour—2d. Bell & Morris, "Prince," Diploma.

Cows.—1st. J. M. Sherwood, "Philopena," $15—2d. Bell & Morris, "Victoria," $10—3d. R. C. Nicholas, Geneva, "Flora," Dip.

Two year old Heifers—1st. J. M. Sherwood, "Sybil," $10—3d. H. N. Carey, "Lilly," Dip.

Yearling Heifers.—1st. To H. N. Carey, "Rose," $10.

Heifer Calves.—1st. To Z. B. Wakeman, "Sylvia," Col. Tour—2d. J. M. Sherwood, "Dahlia," Dip.

HEREFORD CATTLE.

Bulls.—1st. To Erastus Corning, Alb., "Sir George," $15—For the best two year old, to T. H. Hyatt, Rochester, "Don Quixotte," $10.

Cows.—1st. and 2d. To Erastus Corning, for "Aston Beauty," $15, and for "Mary," $10. To T. H. Hyatt, 1st, for two year old Heifer, "Emma," $10.

DEVON CATTLE.

Bulls.—1st. To H. N. Washbon, Butternuts, "Young Baltimore," $15—2d. E. P. Beck, Sheldon, "Wm. Wallace," $10. To B. P. Johnson, Rome, 1st., for two year old, "Ivanhoe," $10—To E. P. Beck, for yearling, "Criterion," Dip.

Cows.—1st. To E. P. Beck, "Victoria," $15—2d. H. N. Washbon, "Baltimore," $10.

Heifers.—1st. To H. N. Washbon, "Utica," $10—2d. To E. P. Beck, "Flora," Dip.

To H. N. Washbon, for his Calves, Dip.

AYRSHIRE CATTLE.

Bulls.—1st. To C. N. Bement, Albany, "Sheltie," $15—for his yearling bull, "Kenwood," $10.

Cows.—1st. To C. N. Bement, "Alice," $15—for his two year old Heifer, "Fairy," $10.

GRADE CATTLE.

Cows.—1st. To Dolphus Skinner, Utica, $15—2d. H. N. Carey, $10—3d. F. Ingersoll, Vernon, Vol. of Transactions.

Two year old Heifers.—1st. To H. W. Doolittle, Herkimer, $15—2d. H. Crocker, Utica, $10—3d. J. B. Nott, Guilderland, Vol. Trans.

Yearling Heifers.—1st. To H. W. Doolittle, $5—2d. A. J. Bell, Westmoreland, Col. Tour—3d. H. W. Doolittle, Vol. Trans.

Heifer Calves.—1st. To Andrew M'Bride, Marshall, Col. Tour.

NATIVE CATTLE.

Cows.—To H. H. Eastman, Marshall, $15—2d. F. D. Grosvenor, Utica, $10—3d. Henry Waters, Earlville, Vol. Trans.

Two year old Heifers.—1st. To H. H. Eastman, $15—2d. W. L. Mould, Paris, $10—3d. E. F. Head, Kirkland, $5.

Yearlings and Calves.—1st. A. J. Bell, $5—Best calf, G. W. Drew, Kirkland, Col. Tour.

Bulls.—No premiums were offered on bulls in the classes of Native and Grade cattle, but the judges recommended, 1st., to Horace Palmer, Rome, "Bolivar," Col. Tour—2d. Philander Budlong, Oneida co., Col. Tour—3d. To Luther Smith, Otsego, Vol. Trans.—4th. S. M. Foster, New Hartford, Vol. Trans.—Geo. Goertner, Canajoharie, for bull calf, Dip.

WORKING OXEN AND STEERS.

Ten Yoke.—1st. To J. S. & W. W. Wadsworth, Geneseo, $20—2d. To Russell Blackstone and others, New Hartford, $10.

Single Yokes.—1st. To Abram Hurd, Norway, $15—2d. J. S. & W. W. Wadsworth, $10—3d. Luther Comstock, Kirkland, $8—4th. H. N. Carey, $6—5th. E. Sheldon, Cayuga co., $5—6th. Austin D. Neal, New Hartford, $4—7th. S. B. Rhodes, Paris, Vol. Trans.

Three year old Steers.—1st. To Hiram Gridley, Kirkland, $15—2d. J. S. & W. W. Wadsworth, $10—3d. R. Blackstone, New Hartford, Dip.

Two year olds.—1st. To M. L. Butler, New Hartford, $10—2d. Seabury Scoville, Marshall, Col. Tour—3d. B. T. Case, Bristol, Dip.

Yearlings.—1st. To S. W. Gunn, Kirkland, $8.

FAT CATTLE.

Yokes of Oxen.—1st. To Chas. Godfrey, Geneva, $15—2d. Jas. Callanan, New Scotland, $10—3d. C. Booram & Co., Buffalo, Col. Tour.

Single Ox or Steer.—1st. To Hugh Crocker, Utica, $10—2d. E. P. Prentice, Albany, $5.

Cows.—1st. To C. Booram & Co., $10—2d. E. Corning, "Gay," $5—the same, for "Matchless," Vol. Trans.

HORSES.

Thorough Bred Stallions.—1st. To C. T. Albot, Stokes, "Consternation," $20—2d. To N. S. Hungerford, Van Buren, "Sir Henry," $10—3d. C. F. Crosby, Watervliet, "Florizel," Vol. Trans.—4th. T. J. Thompson, Cherry Valley, "Sir Charles," Dip.

"Horse of all work."—1st. To Stephen Fancher, Lysander, "Young Eclipse," $20—2d. Wm. Ferguson, Marshall, "Kentucky Hunter," $10—3d. T. D. Moody, Canton, "Blucher," Vol. Trans.—4th. E. Merriam, Leyden, "Blucher," Dip.

Draught Stallions.—To Erastus Corning, Albany, certificate for his horse "Sampson," as the best horse in his class, having received a premium in the same class last year. 1st. John Van Hoesin, Oneida co., "Patriot," $20—2d. P. & G. Warren, Manlius, "Dragon," $10—3d. Benj. Petit, Bridgwater, "Honest Tom," Dip.

Three years old Stallions.—1st. To Luke Coan, Westmoreland, "Black Messenger," $15—2d. John M. Tiffany, Norwich, "Young Godolphin," $10.

Discretionary Premiums.—To Isaac Fairchild, Onondaga co., "Beppo," Col. Tour—Mathew Clarke, Oneida co., "Sir Roderick," Vol. Trans.—G. B Rowe, Canastota, "Young Sir Charles," Dip.

Matched Horses.—1st. To Ardon Merrill, Rome, grey horses, $10—2d. J. Butterfield & Co., Utica, black horses, 2 Vols. Trans.—3d. Lewis Joy, Trenton, Dip.—A Diploma and Vol. of Trans. for 1845, to Welch & Mann, for five pairs of cream colored matched horses.

Geldings.—1st. To J. Butterfield & Co., $10—2d. Abraham Soles, Schenectady, Vol. Trans.—3d. G. W. Gardner, Utica, Dip.—J. Lennebacker, Utica, Dip. (discretionary.)

Mares and Colts.—1st. To Geo. Fordon, Geneva, $20—Joel B. Nott, Albany, for his mare "Iodine" and colt "Effingham," $10—3d. A. Close, Paris, Dip.

Three years old Mares.—1st. To Isaac Fairchild, Fabius, "Fanny Grey," $10—2d. W. C. Burrett, Paris, Vol. Trans.

Two year old Mares.—1st. To Geo. Fordon, Geneva, Dip.—2d. J. Fairchild, Vol. Trans.

Discretionary.—To Roswell Morgan, for pair of Arabian colts, Vol. Trans.—Joel B. Nott, for a yearling colt, "Chlorine," Vol. Trans.

Mules.—To Joseph Cloyes, Morrisville, for one pair of Mules, Vol. Trans.

SHEEP.

Long wooled Bucks.—1st. To J. M'D. McIntyre, Cotswold, $10—2d. Wm. Huxford, New Hartford, Bakewell, Col. Tour—3d. W. Rathbone, jr., Springfield, Dishley, Dip.

Long wooled Ewes.—1st. To J. J. Boshart, Mohawk, $10—2d. W. Rathbone, jr., Col. Tour.

Long wooled Lambs.—Premium equally divided between Geo. Brinkerhoff, Albany, and Fred. B. Hollis, Gilbertsville, $5.

Middle wooled Bucks.—1st. J. M'D. McIntyre, $10—2d. Fred. Easton, Mt. Morris, Col. Tour—3d. Z. B. Wakeman, Dip.

Middle wooled Ewes.—1st. To J. M'D. McIntyre, $10—2d. J. M. Sherwood, Col. Tour—3d. Z. B. Wakeman, Herkimer, Dip.

Middle wooled Lambs.—To J. M'D. McIntyre, $5.

Merino Bucks.—1st. To H. & J. Carpenter, Poughkeepsie, $10—2d. J. M. Sherwood, Col. Tour—3d. Reed Burrett, Dip.

Merino Ewes.—1st. J. M. Sherwood, $10—2d. Israel Smith, DeRuyter, Col. Tour.

Merino Lambs.—J. M. Sherwood, $5.

Saxon Bucks.—1st. To S. B. Crocker, Vernon, $10—2d. S. H. Church, Vernon, Col. Tour—3d. J. R. Jones, Vernon, Dip.

Saxon Ewes.—1st. To S. H. Church, $10—2d. S. B. Crocker, Col. Tour—3d. D. C. Barnes, Deerfield, Dip.

Saxon Lambs.—L. T. Marshall, Vernon, $5.

Sheep from other States.—Diplomas to I. H. Nettleton, J. N. Blakesley, N. B. Smith, and Stephen Atwood, all of Litchfield co., Ct., for superior Merino Sheep.

Fat Sheep.—1st. To John Reeves, Lysander, $10—2. To J. M'D. McIntyre, Albany, Col. Tour—3. Geo. Brinkerhoff, Albany, Vol. Trans.

SWINE.

Boars.—1st. To C. R. Nichols, Darien, Leicester, $10—2d. J. M. Sherwood, Berkshire, Col. Tour—3d. L. T. Marshall, Vernon, Dip.

Sows.—1st. To J. J. Boshart, Mohawk, Berkshire and Leicester, $10—2d. Robert Eells, Westmoreland, grade Berkshire, Col. Tour—3d. Peter Smith, Utica, Dip.

Pigs.—1st. To Robert Eells, Westmoreland, $3—2d. Jas. Plant, Utica, Dip.

POULTRY.

To L. Tucker, Albany, best lot of Dorking Fowls, $3—To the same, for best pair of Turkeys, (wild) $3—To the same, for best and greatest variety of Fowls, $10—To Geo. Bement, Albany, best lot Black Polands, $3—To the same, for best pair of Geese, (African) $3—To the same for best pair of Ducks, (Muscovys) $3.

John Paris, Albany, for ten varieties of Pigeons, a fine display, Dip.

Master E. R. Johnson, Rome, for the great variety of fowls exhibited by him—although he had not enough to sweep the premium, his specimens were very fine indeed, and the taste displayed in the arrangements of his coops deserves encouragement—Dip.

Mr. Robinson's fowls called "Sampsons," Dip.

PLOWS.

1st. To Howard Delano, Mottville, "Diamond Improved," $15—2d. Thos. D. Burrall, Geneva, "Shell Wheel," Premium last year, certificate—3d. Brainerd & Comstock, Rome, "Diamond," No. 5, Premium last year, certificate—4th. E. Wilson, Vernon, "Diamond," No. 5, Premium last year, certificate—5th. Miner, Horton & Co., Peekskill, "No. 22," Silver Medal—6th. John B. Gaylord, Auburn, "No. 6," Dip.—To Alvah Jefferson, Darien, "Michigan Subsoil," $10.

FARM IMPLEMENTS.

Farm Wagons—1st. To Peter S. Eastman, New Hartford, $10—2d. J. S. & M. Peckham, Utica, Vol. Trans.

Harrows—To Oren Barton, Tyler, (Geddes Harrow,) Col. Tour.

Scarifier—Oren Barton, $5.

Cultivator—Oren Barton, Col. Tour.

Fanning Mills—1st. To I. T. Grant & Co., Scaghticoke, Junction, Silver Medal—2d. Clow & Trulon, Mentz, Vol. Trans.—3d. Jas. Patterson, Canandaigua, Dip.

Horse Power—To A. D. Childs, Rochester, $10.

Threshing Machines—1st. To A. Douglass, Skaneateles, $10—2d. Hart, Higham & Co., Vulcan Works, Utica, Vol. Trans.—3d. Ellery Hicks, Dip.

Drill Barrow—To Abm. Randall, Oneida co., for barrow to plant potatoes and corn, Col. Tour.

Straw Cutters—1st. To J. G. Case, Utica, (Sanfords,) Silver Medal—2d. J. C. Rich, Penfield, Vol. Trans.—3d. Martin Sanders, Cortland, Dip.

Corn and Cob Crusher—To J. A. Pitts, Rochester, $10.

Farm Horse Cart—To Wm. Carroll, Albany, Dip.

Revolving Horse Rake—1st. To Jas Smith, Clarkson, Col. Tour—2d. Albert Brockway, Bridgewater, Vol. Trans.

Ox Yokes—1st. To A. Munroe, Galway, Col. Tour—2d. Wm. Hill, Marcy, Vol. Trans.

Grain Cradles—1st. To E. S. Hager, Frankfort, $3—2d. David Flanders, Stockholm, Dip.

Hay Fork—Taylor, Buttolph & Co., Dip.

Grass Scythe—H. C. White, Albion, Dip.

Hoes—R. & E. Clark & Co., Unadilla Forks, $2.

Corn Sheller—J. D. Briggs, Saratoga, Dip.

Corn Cutter—J. M. Cleveland, Adams, $2.

Manure Forks—Taylor, Buttolph & Co., Dip.

Reaping Machine—O. Hussey, Baltimore, Md., $15.

PLOWING MATCH.—20 Entries.

1st. To Frederic Smith, Westmoreland, $15; plowman, Wm. Jackson, Diamond Plow, Brainerd, Comstock & Co., Makers—2d. Elon Comstock, Rome, $12; Stephen Pope plowman, same Plow as No. 1.—3d. Thos. D. Burrrall, Geneva, $10; Burrall's Plow—4th. O. R. Babcock, Bridgewater, Col. Tour—5th. H. N. Carey, Marcy, Vol. Trans., M. Mayhew plowman, Livingston co. Plow.

Boys under 18 *years of age*—To E. W. Butler, Rome, 16 years of age, Darien Plow, No. 5, $10.

BUTTER.

Best lot from 5 cows—1st. To E. R. Evans, Marcy, $25—2d. Thos. Hawks, Columbia, $15—3d. Geo. Vail, Troy, $10.

Best 25 lbs. made in June—1st. To R. S. Ransome, Perryville, $10—2d. O. C. Crocker, Union, Col. Tour—3d. P. Case, New Hartford, Vol. Trans.

Best 50 lbs. made at any time—1st. To Melas Adams, Martinsburgh, $15—2d. S. M. Foster, New Hartford, Silver Medal—3d. O. Cole, Litchfield, Silver Medal—4th. D. Eells, jr., New Hartford, Silver Medal—5th. W. Ottley, Oaks Corners, Silver Medal.

CHEESE.

On ten Dairies—1st. To H. Burrall, Salisbury, $20—2d. R. Eells & others, Oneida co., $10.

Another lot of the dairies presented by A. L. Fish, of Litchfield, Herkimer co., were very superior, and had the committee been authorized to award two of the premiums to the same county, this lot would have received the second premium—Silver Medal.

Over one year old—1st. To Robert Eells, Westmoreland, $15—2d. Fred. Ingersoll, Vernon, Silver Medal.

Less than one year old—1st. To W. S. Ford, Salisbury, $15—2d. W. Ottley, Silver Medal—3d. F. Hallenbeck, Herkimer co., Silver Medal—4th. N. Wilcox, Winfield, Silver Medal—5th. J. Smalley, Norway, Silver Medal.

Spencer Brown, of Newport, Herkimer co., for two samples of round or navy cheese, Dip.

More than 18,000 pounds of cheese exhibited in this class, and every cheese was of superior quality.

MAPLE SUGAR.

1st. To Joel Woodworth, Watertown, $15—2d. Moses Eames, Rutland, $10—3d. W. E. White, Walton, Col. Tour—4th. Erastus Bigelow, Sangerfield, Dip.—5th. Sidney Spring, Eaton, Dip.

SILK.

Sewing—1st. To Clark Avery, Perryville, $15—2d. D. Irish, Perryville, $10—3d. J. Hutchinson, River Head, Col. Tour.

Reeled.—1st. To Mrs. Irish, Perryville, $10—2d. Clark Avery, Col. Tour—3d. Benj. Blackman, Verona, Dip.

Cocoons—1st. To Clark Avery, $10—2d. John Osborn, Utica, Col. Tour—3d. Benj. Blackman, Dip.

FRUITS.

Greatest variety of table Apples, Ellwanger & Barry Rochester,	$5
2d do do. table Apples, David Thomas, Cayuga county,	3
3d do. do. table Apples, J C. Hastings,	Vol. Tr.
Best 12 sorts table Apples, Oliver Phelps, Canandaigua.	$3
Greatest variety table Pears, D. Thomas, Cayuga,	3
2d greatest " " " Ellwanger & Barry, Rochester,	Vol. Tr.
Greatest variety winter Pears, David Thomas Cayuga Co.,	Vol. Tr
Best 12 Quinces, Oliver Phelps, Canandaigua,	do.
Best 12 Peaches. N Goodsell, Greece, Monroe county,	do.
" 24 Plums, Henry Green, Utica,	do.

Best 6 bunches Native Grapes, W. Merrine, Utica,	Vol. Tr
“ 6 bunches Foreign “ S. D. Childs, “	do

VEGETABLES.

12 best table Turnips, Dr. A. Brigham, State Lunatic Asylum Utica,	$1
12 best Carrots, G. S. Dana, Utica,	1
12 best table Beets, David Gray, Jr., Marcy,	1
12 best Onions, C. F. Crossman, Rochester,	1
3 best heads of Cabbage, D. Gray, Jr., Marcy,	1
12 Tomatoes, D. Grey, Jr., Marcy,	1
10 Egg Plants and tree of do., C. E. Goodrich, Utica,	1
Best half peck Lima Beans, Dr. A. Brigham, do.,	1
3 best squashes, “ “ “	1
Best half peck table potatoes, James Rees, New Hartford,	2
2d best half peck table potatoes, R. Eells, Westmoreland,	1
Best seedling Potatoes, 4 specimens, ¼ peck each, H. N. Langworthy, Irondequoit,	5
12 ears best seed Corn, Charles W. Eells, Kirkland,	1

DISCRETIONARY.

Potatoe Onions. J. Greenleaf, Brockport,	Vol. Tr. and 1
C. E. Goodrich, for several samples of Watermelons and Cantelopes, and to G. W. Cromwell for Watermelons.	Vol. Tr. each.
Sweet Corn, C. E. Goodrich, Utica,	1
D. Gray, Jr., for great variety of Vegetables,	Vol. Tr.

DOMESTIC MANUFACTURES.

Woolen Blankets.

1st.	George W. Henry, Martinsburgh,	$5
2d.	Jacob S. Van Allen, Black Rock,	4
3d.	Mrs. V. R. Voorhies, Amsterdam,	3

Flannel.

1st.	Chester Buck, Lowville, Lewis Co.,	$5
2d.	George W. Henry, Martinsburgh,	4
3d.	Wm. Ottley, Oak's Corners, Ontario Co.,	3

Woolen Cloth.

1st.	Samuel Churchill, Little Falls,	$5

(No other specimens found by committee, although two others entered on list.)

Woolen Carpets.

1st.	Hiram Mills, Martinsburgh,	$5
2d.	William Ottley, Oaks Corners,	4
3d.	Mrs. V. R. Voorhies, Amsterdam,	3

Brussels Carpets.

1st.	Hotchkiss & Smith, Auburn,	$5
2d.	Thompsonville Co., Conn.,	3

Rag Carpets.

1st.	Mrs. Benjamin Blackman, Verona, Oneida Co.,	$3
2d.	“ Benjamin Plant, New Hartford,	2
3d.	C. Robinson, Clinton,	1

Kersey.

1st.	E. M. Bateman, Venice, Cayuga Co.,	$3
2d	S. W. Abbott,	2
3d.	George W. Henry, Martinsburgh,	1

Double Carpet Coverlet.

1st.	Miss Adeline Jones, Westmoreland,	$4
2d.	John Winslow, Watertown,	3
3d.	Abram Koonz, Albany,	2
4th.	Susan H. Bronson, Vernon,	1

Knit Woolen Stockings.

1st.	Mrs. Acsah Coe, Columbia,	$2
2d.	“ Hannah Bostwick, Lowville,	1
3d.	Chester Buck, “	Dip.

Linen Cloth.

1st.	Joseph Wells, Denmark,	$5
2d.	Aaron Bailey, Cherry Valley,	4
3d.	Wm. Ottley, Oaks Corners,	3

Linen Diaper.

1st.	Mrs Achsah Coe, Columbia,	$5
2d.	George W. Henry, Martinsburgh,	4
3d.	Levi T. Marshall, Vernon,	3

Hearth Rugs.

1st.	George B. Cary. Richfield,	$5
2d.	Mary Tunnecliff, Warren, Herk. Co.,	4
3d.	Geo. B. Cary. Richfield,	3
4th.	Miss Manahan, Utica,	2
5th.	Mrs. Peter Miller, Turin, Lewis Co.,	1
6th.	C. Robinson, Clinton,	Dip.

Linen Sewing Thread.

1st.	Peter Crispell, Jr., Ulster Co., 1 lb.,	$2

Linen Knit Stockings.

1st.	Mrs. Calvin Aldrich, New Hartford,	$2
2d.	Mrs. W. C. Burrett, Paris,	1
3d.	“ Squire M. Mason, New Hartford,	Dip.

Silk Stockings.

1st.	Mary E. Dayton, Vernon,	Dip.
2d.	Mrs. D. Irish, Perryville,	do.
3d.	Thomas Potter, Utica,	do.

Cotton Stockings.

1st.	Mrs. Morris,	$2
2d.	“ Sophia Willard, New Hartford,	1
3d	“ D. Skinner, Deerfield,	Dip.

Tow Cloth.

1st.	Mrs. Wm. Potter, Marcy, Oneida county,	$1
2d.	Mrs. Wm. Ottley. Oaks Corners,	Dip

DISCRETIONARY PREMIUMS.

G. Farmer, Mohawk, Steam Dairy Operator,	Diploma.
A. E. Jackson, Boonville, Cheese Press,	“
Mrs. L. T. Marshall, Vernon, Shawl, Mitts, and Gloves,	$3
Mather Beecher, Remsen, Bark Mill,	Vol. Trans.
S. Purdy & Co., Whitesboro, oak churn, molasses can,	Vol. Tr.
N. P. White, Whitesboro, Dentist plate work,	Dip.
. . Lombard, Elbridge, Improved fence,	Vol. Cult.
Miss Olive Austin, Smyrna, knit Veil, Caps, &c.	$3 & Dip.
Warnick & Bryan, Utica, Tobacco, Cigars, and Mustard,	Dip.
Mrs. Guinguigumer, Utica, Millinery,	“
Benedict & Barney, Syracuse, Gold Pens,	“
Mrs. D. Skinner, Deerfield, Marine Palace of shell work two Ottomans, and pair of shoes, highly creditable to her taste and ingenuity,	$3
Curtis & Van Arsdale, Kirkland, Brown Earthen Ware,	2
Noah White, Utica, Stone Ware,	3
Wm. Carroll, Albany Spring Cart,	Vol. Tr.
Lucretia Tyler, Lawrence, Horse Netting,	$3
James Sangster, Buffalo, Miniature Noah's Ark,	3
Gaius Clark, Syracuse, Congress Desk,	Vol. Tr.
Miss Mary E. Spencer, Utica, Emb. Shawl,	Dip.
Jas H. Dunbar, East Hamilton, Pr. Fringe Mittens,	$1
Miss L. C. Morris, Auburn, Shell work,	5
Miss Gay, Troy, Shell flowers and Bead bags,	2
Grove Lawrence, Syracuse, bbl. Patent Salt.	Dip. and Vol. Tr.
Joseph Miller, Utica, miniature ship and frigate,	$3
Elon Comstock, Rome, Agricultural and Horticultural Implements,	$5 and Dip.
Miss Julia N. Tucker, Albany, Embroidered Port Folio,	Dip
D. J. & A. I. Smith, Syracuse, Hand Railroad Car,	Dip.
Mrs. Mary E. Storms, Utica, Shell box,	$2
Wm Butler, Phelps, Coon skin robe,	Vol. Tr.
G. W. Henry, (blind,) Frankfort, Brushes,	$2
David Kendall, New Lebanon, Thermometers,	Dip
J. T. Farrand, water drawing machine,	Vol. Tr
Mrs. Voorhies, Amsterdam, four cases manufactured articles,	$10 and Dip.
Brainard, Comstock & Co., Rome, Plows,	Dip
Walker and Gavit, Albany, best Daguerreotypes,	Silver Medal.
Miss L. M. Eames, New Hartford, knit window curtains,	Dip.
“ L. M. Pierson, Sullivan, counterpane,	“
Mrs. Luke Cone, Westmoreland, straw hat,	“
E. K. Browning, Utica, machine cards,	$3 and Dip.
Hopkins, Sergeant & Co., Auburn, box machine cards,	$3
Henry Lawrence, Chenango county, compound lever tug-buckle,	Dip.
Four church bells, A. Meneely, West Troy, very superior, having received premium heretofore.	Cert.
Miss C. Devereux, Utica, sofa cushion and worked table cover,	Dip.
Mrs. L. Jones, Utica, case of wax ornaments, an elegant article,	$2
Jonathan Coxon & Co., Utica, brown earthern ware,	$3 and Dip.
Geo. Geddes, Onondaga county, five samples seed corn, all very fine,	Dip.
S. C. Coffin, Portland, Chatauque county, oil paintings, highly commended as specimens of early effort in the art.	
Miss C. W. Gridley, Utica, specimens of oil painting,	Dip.
Miss O'Toole, and Miss Mary Putnam, Rome, two samples of raised worsted work, very creditable to the exhibitors,	Dip.
G. W. Brownson. Amsterdam, specimens of corn brooms,	$2
Miss M. J. Morris, Auburn, samples of lace work,	3
Mrs. Acsah Cole, Columbia, Herkimer county, two pair cotton woolen blankets,	$3 and Dip.
Miss Georgiana S. Manning, Syracuse, worsted worked reticule,	$3
Mrs. Hamilton Spencer, Utica, embroidered chair,	Dip.
Mrs. C. M. Bennett, Penn Yan, Yates county, an ottoman cover,	Dip.
J. Parish, Mendon, Monroe county, for a washing machine patented to Nathan Parish, Rush, Monroe county,	Vol. Tr.
John Wilkinson, Union Vale, Dutchess county, presented a convenient plan of a barn, commended.	
Solomon Phelps, Lowville, a sausage cutter,	Dip.
Mrs. Mary Bradley, Utica, embroidered bed spread,	$5 and Dip.
Male members of State Lunatic Asylum, case carved toys,	Dip.
Female “ “ “ “ embroidery and needle work,	Dip.
Catholic Orphan Asylum, Utica, raised worsted work,	Dip.
Miss Margaret Hawthorn, Deerfield, embroidered apron,	$2
“ C. M. Curtenius, Utica, two specimens finely shaded worsted work,	$3 and Dip.
Mrs. Geo. R. Fairbanks, Adams, bed and table spread,	$3
Mrs. Geo. B. Cary, Richfield, worsted worked chair bottoms,	$3
Miss Augusta Dye, Penn Yan, embroidered piano cover,	$2 and Dip.
“ M. J. Johnson, Little Falls, needle work on paper,	$3
Mrs. Wm. Otley, Phelps, pieced bed spread,	$3
E. P. Webster, Utica, carved miniature cottage,	$2
Miss Abby Allen, Carlisle, embroidered screen and sofa pillow,	$2
Wm. Potter, Marcy, pair horse blankets,	1
Jno. Kirkland, Kirkland, worsted table cover,	Dip.
Solomon Phelps, Lowville, sausage cutter,	“
James Goold, Alb., two horse pleasure sleigh,	“
Joseph D Briggs, Saratoga, corn sheller,	“
B. S. Seymour, Westmoreland, window and door butts and fastenings,	“
Elijah Hurlburt, Waterloo, clover machine,	“
Joel Clough, Whitesboro, self setting saw mill apparatus,	“
[illegible] Cady, Newport, Yates' Patent Lock,	“
Dumbarton Glass Factory, Durhamville, Glass,	“

☞ For premiums on Flowers, Stoves, and Flour, see page 336.

GAPES IN CHICKENS.—Turpentine, applied with a feather, internally, to the throat, will in all cases cure this disease. [Tried and found efficacious.]

THE MAYDUKE CHERRY.

It is a little singular, that nearly all pomological writers refer to the Mayduke as a standard for the time of maturity in cherries. The ripening of an early cherry is indicated by comparing it with the Mayduke, or it is a given number of days earlier or later than this well known variety.

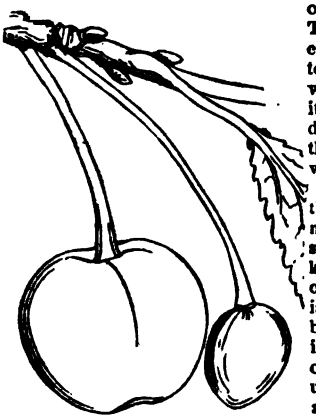

Fig. 93.

Now it happens that the Mayduke is the most variable in its season of maturity of all known cherries. Fruit of a dark red color is often seen on one branch, and that which is nearly green on another. It is thus not uncommon that there is a difference of six weeks on the same tree. The same difference may occur on different trees, one tree being some weeks ahead of another. Hence serious disappointment sometimes results where trees of this variety are purchased and come into bearing, from the frequent lateness in ripening; and cultivators, supposing they have received a very early variety, often consider themselves as having been grievously imposed upon.

The two outline figures at the head of this article, exhibit this difference in the growth and maturity of the fruit, and represent two cherries which grew the present season on the same branch, and within *two inches* of each other; the larger being a dark red, while the smaller was light green. They were drawn accurately from the specimen, exactly of the natural size, and at the same time, (the 19th of 6 mo., June.) There was nearly as great a disparity in several other specimens.

The inappropriateness of taking this variety as a standard for time, is further increased by the fact that it is scarcely ever picked from the tree in a fully ripened state, but most commonly while it is yet only of a dark red color, instead of black as it should be; and before it has attained more than two-thirds of its full size. Some cultivators of fine fruit have been astonished on tasting fully ripened specimens, at the difference between such specimens and those picked at the usual season.

FROST IN VALLEYS.

It is familiar to many that night frosts under a clear sky, are most severe in sheltered valleys, and lightest on exposed hills, where the difference in altitude is not so great as much to affect the temperature from the natural decrease which always takes place as we ascend from the surface of the earth. The tendency of the cold air to sink into hollows, or to become cooled more rapidly by radiation, without the counteracting influence which air in motion always exerts, was finely exhibited by the severe frost which occurred at the commencement of the present summer. A number of thrifty young hickories, about fifty feet high, stood in a depression which was about twenty feet deep. The young shoots had grown a few inches, and being fresh and succulent, were very easily touched by frost. Accordingly, after that cold night, about one-half the young leaves on the tree, occupying the lower half, were completely killed and had turned black; while the upper part of the trees, which reached above the valleys, remained as fresh and green as ever.

Dr. Kirtland, of Cleveland, mentions an experiment in Elliott's Magazine, where the thermometer situated in a valley, sunk during a frosty night, down to 27°, while on a neighboring hill only sixty feet higher there was no frost whatever, the thermometer scarcely sinking to 32°. Such facts may remind those who are about setting out tender fruit trees, as peaches, nectarines, and apricots, that exposed hills, if not greatly elevated, are much better than warm valleys, where the frost is not only more intense, but the increased temperature in summer tends to promote a more rapid and succulent growth, which is less capable of withstanding the severity of winter.

THEORIES TO SUIT CIRCUMSTANCES.

It has not been very uncommon in the history of farming for theories to be manufactured as a sort of apology for bad management or neglect. We see this in various ways. A very common one is to account for the dissemination of weeds by the supposition that the cultivated crop has actually undergone transmutation, and has been converted to the weeds. Where such vegetable intruders grow and multiply with great rapidity, and by means which may be perhaps often concealed from observation, it becomes exceedingly convenient thus to explain this increase, as well as to apologize for a want of more vigilant care in their eradication.

Another illustration of this disposition is given by A. J. Downing, in the excellent article appended to his "Forest and Fruit Trees of America," on the *Duration of Varieties*.

It was for a long time, he observes, a popular opinion, that when a good variety of fruit was once originated from seed, "it might be continued by grafting and budding, for ever,—or at least, as some old parchment deeds pithily gave tenure to land—'as long as grass grows and water runs.'" In opposition to this opinion, the theory advanced by President Knight, was, that all trees of any particular variety, being only parts from the original tree, of limited duration itself, must all die about the time, or soon after the time, that the parent tree dies. "Certain French writers," observes A. J. Downing, "about this time gladly seized Knight's theory, as an explanation of the miserable state into which several fine old varieties of pears had fallen, about Paris, owing to bad culture and propagation. They sealed the death warrant, in like manner, of the Brown Beurré, Doyenné, Chaumontel, and many others. * * * Notwithstanding this, and that ten or fifteen years have since elapsed, it is worthy of notice that the repudiated apples and pears still hold their place among the best cultivators both in England and France. The "extinct varieties" seem yet to bid defiance to theorists and bad cultivators."

* * * * * * *

"The apparent decay of a variety is often caused by grafting upon unhealthy stocks. For although grafts of very vigorous habits have frequently the power of renovating in some measure, or for a time, the health of the stock, yet the tree, when it arrives at a bearing state, will, sooner or later, suffer from the diseased or feeble nature of the stock.

"Carelessness in selecting scions for engrafting, is another fertile source of degeneracy in varieties. Every good cultivator is aware that if grafts are cut from the ends of old bearing branches, *exhausted by overbearing*, the same feebleness of habit will, in a great degree, be shared by the young graft.

"Unfavorable soil and climate are powerful agents in deteriorating varieties of fruit trees. Certain sorts that have originated in a cold climate, are often short lived and unproductive when taken to warmer ones, and the reverse. For this reason the Spitzenburgh apple soon degenerates, if planted in the colder parts of New-England, and almost all northern sorts, if transplanted to Georgia. But this only proves that it is impossible to pass certain natural limits of fitness for climate, and not that the existence of the variety itself is in any way affected by these local failures."

The continued propagation of pears upon the quince stock, for the production of dwarfs, and the continued reproduction from these dwarfs or stunted trees, is given as a reason why the pear, though naturally a much longer lived tree than the apple, so often suffers by a decline of the varieties.

There are many interesting facts, bearing on this subject, stated in the valuable article before mentioned, a few of which we here repeat, and which we doubt not, will prove interesting to some of our readers, as well as to show them the treasure which they would possess in the work alluded to:

"The oldest known variety of the pear is the Autumn Bergamot—believed by pomologists to be identically the same fruit cultivated by the Romans in the time of Julius Cæsar—that is to say, the variety is nearly two thousand years old. It grows with as much vigor, and bears as regular and abundant crops of fair, fine fruit in our own garden, as any sort we cultivate. Whole orchards of the Doyenné (or Virgalieu) are in the finest and most productive state of bearing in the interior of this state, and numberless instances in the western states—and any one may see, in September, grown in the apparently cold and clayey soil near the town of Hudson, on the North River, specimens of this "outcast," weighing three-fourths of a pound, and of a golden fairness and beauty of appearance and lusciousness of flavor worthy of the garden of the Hesperides,—certainly we are confident never surpassed in the lustiest youth of the variety in France. The same is true of all the other sorts when propagated in a healthy manner, and grown in suitable soil and climate."

"To add force to this view [already stated in this article,] we will add, that we have had the satisfaction lately, of seeing trees of the condemned varieties taken from healthy interior districts to the sea-board, where they have already borne fruit as fair and unblemished as ever;—thus proving that the variety was not enfeebled, but only so much of it as had been constantly propagated in a soil and climate naturally rather unfavorable to it. While in favorable positions it maintained all its original vigor." * * * * * *

"A skillful cultivator in Ohio informed us of a case in point. Some years ago he planted two Doyenné pear trees, both apparently healthy. One was from the sea-coast, and the other was from western New-York. The fruit of the former, when it came into bearing, cracked, and showed all the symptoms of decay common where it came from. The other always bore fair fruit. After several years careful treatment, he has at last restored it to the original health of the variety."

LIVE STOCK IN CONNECTICUT.

Sheep.—Connecticut has many fine-wooled flocks of sheep, some of which we had the pleasure of examining in our late excursion though the state.

John Ward, of Salisbury, near Falls Village, has a flock of 700 Saxons. Their fleeces average 2½ pounds, and sold last year at 60 cts. per pound. In another part of Salisbury, we saw a small flock of Cotswolds, belonging to John C. Coffing, Esq. They were purchased of Mr. Devine, of Washington Hollow, Dutchess county, N. Y.

R. G. Camp, Esq., of Litchfield, has a very superior flock of 170 Saxons. They were derived mostly from the noted flock of Charles B. Smith Esq., of Torringford, Ct. The wool of Mr. Camp's sheep is very fine, and the fleeces averaged this season, 2 lbs. 14 ounces, which sold at 66⅔ cts. per pound. Mr. Smith imported two bucks from Saxony, in 1843. Both of these bucks Mr. Camp has used in his flock. His lambs of the present season, many of them, are certainly very fine.

Mr. Lucas, of Goshen, has a small flock of mixed Saxon and Merinos, which are remarkable for the weight of their fleeces. Twelve ewes, six old ones and six yearlings, eight of which reared lambs, gave this season 61½ lbs. of well-washed wool—being an average of five pounds and two ounces.

Henry Watson, Esq., of East Windsor, has one of the best and most profitable flocks we have met with. He is a veteran in the breeding of sheep, as well as other stock. He, in connection with Mr. Hurlbut, of Winchester, purchased some of the best Saxons of the first importation of Messrs. Searle, of Boston, in 1824. His present flock are of various grades of the Saxon blood then obtained, crossed with the pure Merino. His wool is fine, and he obtains the highest prices for it. At several manufacturing establishments where we happened to call, we saw or heard Mr. Watson's wool given as an example to wool-growers of what was wanted in quality and condition, *for fine wool*. This year it brought 50 cents per pound, sold in his neighborhood. Last year he sold it in the dirt, obtaining a price equal to 60 cts. per pound for washed wool. His fleeces average over three pounds, washed. Bucks' fleeces weigh from 5 to 6½ pounds.

Cattle.—In some districts of Connecticut, there are very good cattle, of the various improved breeds. Several enterprising citizens imported stock from England at an early day. Among those who were first to distinguish themselves in efforts to improve this branch of husbandry, were the late Gov. Wolcott, of Litchfield, Messrs. Samuel and Elizur Wolcott, and Col. Jeremiah Wadsworth, of East Windsor. These gentlemen, previous to the commencement of the present century, and in some instances previous to the year 1790, introduced into their respective neighborhoods, various bulls and cows, either imported or bred from stock which had been imported. It is impossible to decide with any certainty, what was the blood of the cattle brought here so many years ago. Gov. Wolcott, it is said, procured some animals of Mr. Heaton, of Throg's Neck, Westchester county, (N. Y.) According to the history given of these cattle in an American edition of Culley's Essay on Live Stock, published forty years ago, they were Short Horns, procured from the banks of Tees, in Yorkshire, England, and brought by Mr. Heaton to Throg's Neck, in 1792. Judging from the animals of the present day, which seem to possess most of their blood, the original stock was similar in character to the ordinary Yorkshire or Holderness Short Horns. Large, rather rough and coarse boned, thin skinned; when well fed, inclined to give large quantities of milk. Cattle having various degrees of the blood of this Heaton stock, (we presume,) are often met with in Connecticut under the name of the "*Eaton breed.*" Gov. Wolcott also introduced some animals, having, as was said, more or less of the Alderney blood in them.

The Hon. Truman Smith, of Litchfield, (for whose kind attentions we desire to return our thanks,) waited on us to several places in his neighborhood, and afterwards furnished conveyance and accompanied us to Goshen. He showed us several cows which were evidently remarkable milkers, said to be descended from the stock of Gov. Wolcott. They were called of the "Alderney breed," but their leading characteristics denoted a predominance of the Yorkshire blood. One of the cows belonged to Mr. Lyman, of Goshen.

Goshen, as we mentioned in an article in our last number, is noted for its cheese-dairies, and several of the farmers have at various times made efforts to improve the milking qualities of their cows, by introducing bulls of the improved breeds. Mr. Lucas, in connection with Mr. Towner, purchased a Durham bull of John Hare Powell, of Philadelphia, some ten or twelve years ago. A numerous progeny came from this bull, and so far as we learned, it was the unanimous opinion that he considerably improved the dairy qualities of the cattle of the neighborhood. Mr. Lucas has a very well-shaped bull, five years old, got by a Durham bull said to have been imported by Mr. Hichcock, of New-York, (afterwards owned by Dr. J. H. Smith, of North Canaan,) and from a Durham cow of Mr. Morgan's, of Hartford. Also several thrifty steers from this bull. At Mr. John C. Coffing's, in Salisbury, we saw a fine lot of eight or ten cows, mostly half-blood Durhams, which appeared to be excellent milkers.

As we above mentioned, it is generally admitted that the half-blood Durhams are decidedly better milkers than the common stock. Yet it is very obvious that most of the dairy farmers pay but little attention to the blood or qualities of their cattle. Most of them buy their cows; and many large herds which we saw presented a most incongruous collection of ugly shapes, and animals indicating but few good qualities for any purpose. Why need this be so? Does not the experience of every farmer teach him that some cows are worth nearly double what others are? And would it not be altogether better in the long run, to raise stock always from those which possess in the highest degree the properties which constitute their value? From our own observation we have no hesitation in saying that a proper attention to this subject for a period of twenty years would *double* the nett income of their cows.

We cannot avoid remarking here, that we noticed in many instances, a very inveterate, and we must think, unreasonable prejudice, against all colors in cattle but *red*. In some instances we heard farmers say they found no fault with the Durhams, "except the color." We put the interrogatory, whether the intrinsic value of the cattle depended on color? They could not say that it did; but they did not *like*, in other words, did not *fancy* such and such colors! It is passing strange that among people who in general claim to discard the influence of *fancy*, at least in agricultural operations, a prejudice like this should be allowed to control the judgment. Why should not that breed be chosen which is best adapted to the purposes of the farmer, without regard to qualities of mere fanciful value? Let this be done, whether the breed found most suitable be the Durham, Hereford, Devon, Ayrshire, or any other. There can be no special excellence in one color more than another—the only advantage resulting from attention to this point, is, that as each particular breed has a color more or less peculiar, that color, whatever it may be, is an indication of the purity or genuineness of the blood.

Messrs. S. and L. Hurlbut, Winchester, have a fine herd of Devons. There are some twelve or fifteen head of full-bloods, and perhaps as many more which are so nearly full-blood that an ordinary observer would scarcely be able to distinguish the difference. Messrs. H. have been breeding this stock for more than twenty-five years. They purchased of Wm. Patterson, Esq., of Baltimore, in 1819, the bull *Holkham*, whose immediate progenitors were sent as a present to Messrs. Patterson & Caton, by Mr. Coke, late Earl of Leicester. Holkham was kept by Messrs. H. till he was fifteen or sixteen years of age. He was then sold, and subsequently came into the state of New-York. He continued to be a vigorous and sure stock-getter till he was twenty years old. His progeny in Connecticut were very numerous, and their deserved popularity did much to establish the reputation of the Devons in that state.

Messrs. H. have sold many bulls and bull calves, of the Devon blood—either pure or of different grades. We understood them to say that they had sold over fifty which came to the state of New-York. Their present herd is certainly a beautiful one, and seems exceedingly well adapted to the climate, soil, and purposes of that section. They are hardy, active and tractable, making the most capital working cattle, especially where quick and spirited teams are required. They also fatten well, and their beef is represented as of superior quality. Their points and appearance for dairy qualities is generally superior to what we expected to see. Several of the cows are evidently superior milkers. Two or three of them, nearly full-bloods, have, on special trials, made from twelve to fourteen pounds of butter each per week, on grass feed only.

There is no doubt that certain families of the Devons are good milkers. In England, Mr. Bloomeeld, a tenant of the Earl of Leicester's, obtained a high prize for his herd of Devon cows, on account of their superiority as *butter stock*. Mr. George Patterson, of Baltimore, has made several purchases of stock from Mr. Bloomfield, and we believe their reputation for the dairy is fully sustained in this country. Messrs Hurlbut have now a bull and several young cows which they purchased of Mr. Patterson, of the stock derived from Mr. Bloomfield. They are beautiful animals. The bull is a very superior one—far superior in symmetry, handling, and indeed in every good point, to any other Devon we ever saw.

At Farmington we saw very good cattle. We are particularly indebted to Timothy Cowles, Esq., and to Dr. Carrington, of this place, for their polite attentions in showing us the fine farms and stock of this rich and beautiful neighborhood, and several of the neighboring towns. Mr. Cowles is an extensive farmer. He has for many years been in the practice of fatting oxen in the winter season, to be sold at the New-York and Boston markets in the spring. Hay is the most important article in fattening, though corn meal and sometimes potatoes are used to finish the process. But the hay is made with great nicety—the grass is cut while it is green, not past bloom—carefully kept from rains and dews, and put in the barn in the most perfect condition. This hay is so nutritive that animals thrive as fast on it as on the best of grass feed.

Mr. Cowles is one of the very few farmers we have met with, who in selecting stock for fattening, regard the important quality of *handling*. Mr. Cowle's observation early taught him the importance of this quality, and for nearly forty years he has been in a great degree governed by it in selecting his stock. He showed us several yoke of very fine oxen, belonging to himself, some of which he intends for slaughter next winter, and also pointed out to us in an adjoining pasture, several other yokes of oxen, belonging to Mr. Deming, and some of his other neighbors. In general, the best of these oxen showed marks of a high Devon cross; but a few of them were half and quarter blood Durhams, crossed with the mixed Devon and native. One of these, belonging to Mr. Cowles, was on the whole, the finest ox we saw in Connecticut. Mr. Cowles had also a very large, though rather coarse ox, a cross of the Durham, which was bred and reared by his brother, the late Richard Cowles. He has likewise an excellent cow of the same breed, which took the first premium at the show at Hartford last year.

Mr. John T. Norton has a fine dairy of twenty selected cows. He is crossing these with a Durham bull of a noted milking family, bred by Mr. Prentice, of this city. Dr. Carrington has also some very pretty stock—a bull and some heifers—some of which show in a good degree the leading points of the Durhams.

[*To be continued.*]

DOMESTIC ECONOMY.

Cooking Tomatoes.—Mr. Beecher, of the Indiana Farmer, speaks with the enthusiasm of an epicure on the subject of tomatoes. He says whoever does not love them, "is an object of pity." There's no accounting for taste. The editor of the Boston Courier, for instance, repudiates Mr. Beecher's taste, and compares tomatoes to "rotten potatoe-balls"! But we give Mr. Beecher's directions for cooking tomatoes. We have long been accustomed to eating those cooked in a similar way, excepting adding the eggs, and cheerfully endorse his opinion of the excellence of the mode. What he says about cooking them "enough," is important. The directions are said to be for a mess amounting to about three pints when cooked.

"Begin by parboiling two onions. While this is doing peel the tomatoes, which is easily done after hot water has been poured over them; cut them up and add the onions, also a teacupful and a half of bread crumbled fine, a table spoonful of salt, a heaping teaspoonful of black pepper, a lump of butter of the size of a turkey's egg, or about four table spoonsful. Beat these thoroughly together and set them over a slow fire to stew. *They should cook slowly and for a long time;* never less than three hours, but the longer the better. About fifteen minutes before they are to be used, beat up six eggs and stir them in, and put them on fresh coals and give them one grand boil up, stirring them all the time. When so cooked, no directions will be needed how to eat them.

The art of cooking the tomato lies mostly in cooking them enough. They should be put to work the first thing after the breakfast things are out of the way, even if you do not dine till three."

Washing Butter.—We are aware that good butter makers disagree as to the propriety of working butter in water. In times past, we have made some experiments in this line. We have also persuaded others to make fair trials by washing a part of a churning in cold water, working the other part thoroughly without water. The result in all cases has been, that that from which the buter-milk was expelled without water, *kept best*. We notice some pointed remarks on this subject in the Indiana Farmer & Gardener, edited by Rev. H. W. Beecher.

Mr. D. Embree, who states that he has followed the business of butter-making and kept dairies, sometimes of fifty cows, does not agree with another writer in that paper as to washing butter. "I am satisfied," says Mr. E., "that it extracts the good flavor from it, and that it will not keep so well as when water is not used. We salt our butter the first working, and after it cools, say twelve hours, all the buttermilk and watery particles from the salt can be worked out. I would ask any person to try an experiment, by taking 3 lbs. of butter made without having any water come in contact with it, put one pound in ice-water, one in cold spring water for, say, two hours, then expose them all to the same temperature for a few hours, and they will be able to answer a question I was asked while attending Washington market, by an old butter maker who came and stood by my tub. "Why is it, that my butter, which I took out of a cold spring since daylight, is so soft that I can hardly keep it in my tub, while your's, which must have been out almost all night, is as firm as a rock?" I would wish them to keep the pounds separately, but in the same way, for a month, and then try them."

Mr. Beecher adds, that on receiving the above, he conferred with a noted butter-maker, who says, "When butter is to be immediately used, she prefers washing it; but if it is to be kept any length of time it should not be washed."

To keep Hams in summer.—Place a layer of coarse salt in the bottom of a barrel, put down a ham and cover it with salt, then another, and so on till the barrel is full. The barrel must be kept in a *dry* place. The hams will come out perfectly good, if they were put in good.

TRANSMUTATION.

L. A. Moody, Esq., of Cabotville, Mass., states a case of supposed transmutation upon which he wishes our comments. The case, according to his relation, may be stated in substance as follows: In 1838 he had a field of ten acres of wheat. It was new ground—the wheat having been sown among "girdlings." The crop became too ripe before it was cut, and shattered a good deal in gathering, but yielded about twenty-five bushels of good wheat per acre, besides from two to five bushels per acre, by the estimate of his neighbors, wasted on the ground. After harvest the stubble was plowed in, and the wheat (or what was deemed such,) came up so abundantly, that instead of planting the field to corn the next spring, as had been designed, it was resolved to leave it in possession of the wheat. But as the crop approached maturity, and the heads made their appearance, it was all at once discovered that what had been taken for wheat was *chess*, with the exception of a few scattering heads." It is added—"if all the chess which grew in the previous crop of wheat had been sown, it would not have stocked more than one acre as well as that spontaneous growth." (!)

Mr. Moody says he had always before "ridiculed the idea of wheat turning to chess," but "of course," he continues, "after such tangible evidence and practical demonstration, (?) I could say no more against it. * * I cannot believe it possible for *bona fide* transmutation to take place, neither can I account for the fact of my having ten acres of chess on a field seeded with wheat, and if you can give a satisfactory solution of the mystery you will confer a great favor."

We are by no means confident that we can give what will be to Mr. Moody "a satisfactory solution of the mystery." To fully explain the case, everything pertaining to it should be known; and without distrusting the faithfulness of the account before us, it is not improper to say that it fails to give a thorough knowledge of the circumstances; indeed it is impossible that this knowledge could be obtained without a personal examination of the field at the time the first named crop was harvested, as well as at subsequent periods.

It will be noticed in the first place, however, that the case furnishes no direct evidence of transmutation. There were ways enough in which the chess might have grown without the necessity of resorting to a belief in any supernatural cause for its production. The stubble of a wheat crop was plowed in. It is admitted that this crop had some chess in it, though but a small quantity was thought to have been gathered with the wheat. But the wheat was very ripe when it was harvested. So must the chess, whatever there was, have been very ripe, and every one knows that in this state, especially if it has been wet after being cut, it sheds its seed very easily. Besides, the chess, from being of a shorter growth of straw than the wheat, would not be so cleanly gathered by the sickle or cradle; so that several circumstances would conspire to cause an undue proportion of what chess grew in the first crop to be left on the ground. Again, the chess is more hardy than wheat; nearly every plant which came up would probably live through the winter, and if any vacancies happened by the wheat plants being killed, they were quickly filled by the spread of the chess. That the chess should have been taken for wheat, —*good and true*—until it headed, is not strange. There are but few, comparatively, whose observation is sufficiently close to distinguish wheat from chess in their early stages. It is not uncommon to find farmers confounding different species of grass (and wheat and chess are indeed but grasses,) under the same name.

But if transmutation actually takes place, we contend it can be demonstrated, and this, so far as we know, has never yet been done. It was alleged that wheat and chess had been detected growing from the same root; but on examining the roots produced as a sample of this, both species of plants were found separate and each traced to its original source. It was supposed that wheat and chess had been seen in the same head; but a critical examination showed that a panicle of the chess had only been wound (either artificially or otherwise,) into the wheat-head, and thus occasioned the illusion.

In conclusion, we would suggest to the advocates of transmutation, the adoption of a plan for experiments by which their theory, if correct, can be proved beyond a doubt. Take a quantity of earth suitable for the growth of wheat, and subject it to such a degree of heat, (say 200 deg., for ten hours,) by placing it in an oven or on a stove, as will destroy the vitality of any seeds it may contain. Then put the earth in pots, each of sufficient size to admit the full growth of a wheat plant, and after having sufficiently moistened the earth, plant in each pot one or more kernels of wheat, being particular to note the exact number planted, and also the exact number of plants which come up. Subject the plant to any process which is deemed most likely to cause transmutation. If any of these plants produce chess, it may be set down as proof that it sometimes comes from wheat.

NATIONAL WEALTH.

Every one knows that heavy imports and light exports will in time render any nation bankrupt, while the reverse cannot fail to enrich. It hence becomes an object with every patriot to discover and promote such kinds of business as will increase the exports of the nation.

A large part of the United States is finely adapted to the cultivation of *fruit*. American apples of the best quality sell at very high prices in Europe. In one case a successful cultivator in this state, by a very careful selection of the finest, obtained twenty-one dollars per barrel for Newtown pippins, sold in the London market, and nine dollars per barrel is the usual price he obtains there for his best fruit.

Now, every cultivator knows that hundreds of bushels may be obtained from an acre under the very best management and cultivation. What then could more contribute to national, as well as to individual prosperity, than extensive plantations of those varieties of the apple, pear, and other fruits, as are best adapted to conveyance to a distance. There is no doubt that if the northern and middle states were able to furnish large quantities of the very best kinds, that markets would be opened in many parts of the world where such articles are now unknown. An acre of fruit will often yield more than ten times as many bushels as an acre of the best wheat, and at far less expense in labor. There is no question, therefore, that millions of dollars worth might be yearly sent out and scarcely interfering with the amount of grain and other farm crops already raised. Nor need any fear of overstocking the market, while our own cities and large villages are so scantily supplied with the best sorts, some of the finest having yet rarely ever passed the bounds of the amateur's garden, and most of the best being yet unknown to nineteen-twentieths of purchasers.

NEW PUBLICATIONS.

"Views of Canada and the Colonists—embracing the experience of a resident; views of the present state, progress, and prospects of the colony; with detailed and practical information for intending emigrants; by A Four Years' Resident."—In a recent tour through a portion of Canada, we had the good fortune to make the acquaintance of the author of the above work, (Mr. J. B. Brown, now of Montreal,) from whom we are happy to acknowledge the receipt of a copy of it, which we have read with much interest and satisfaction. This work was written and published at Edinburgh, during a recent visit of the author to his native country, in order to supply the information so necessary for those who contemplated emigrating to the Canadas; and it contains a larger amount of information relative to these thriving colonies, and exhibits their social and political condition and natural advantages, with more apparent candor and truth, than any thing we have before met with. To emigrants, intending to settle in the Canadas, we should think it would prove of great service. The statistical portions of the work, seem to have been prepared with care, and are, we presume, entitled to full credit. He furnishes statements of the agricultural products of some of the most populous districts; from which we make the two following extracts, believing they will be regarded with general interest. The first refers to the "London District," so called, Canada West, which in 1843, it is stated, contained 109,706 cultivated acres, and possessed a population of 29,657. It produced—

	Bush.		*Bush.*
Wheat, ...	246,045	Peas, ...	112,734
Barley, ...	16,075	Indian Corn,.....	79,851
Rye, ...	10,162	Buckwheat, ...	23,558
Oats, ...	224,769	Potatoes, ...	268,619

The live stock owned in the district, by the official returns of 1842, were

Neat Cattle,.......	47,678	Sheep, ...	43,327
Horses, ...	7,232	Hogs, ...	2,929

The Niagara District is composed of two counties, having twenty-three townships, and a population of a little over 38,000, and 150,000 acres of land under cultivation. In 1842, the district produced—

	Bush.		*Bush.*
Wheat, ...	249,000	Peas, ...	96,000
Barley, ...	42,000	Indian Corn,.....	48,000
Oats, ...	249,000	Buckwheat, ...	69,000
Rye, ...	9,000	Potatoes, ...	304,000

The live stock in that year comprised 35,000 neat cattle, 54,000 sheep, 33,000 hogs, and 10,000 horses.

The work is for sale by Armour and Ramsay, Montreal.

A Universal Pronouncing Gazetteer, containing topographical, statistical, and other information, of all the more important places in the known world; with a map. By Thomas Baldwin, assisted by several other gentlemen. Philadelphia; Lindsay & Blakiston—1845. 12 mo. pp. 550.

Every teacher, every reader of travels or of history, and indeed every intelligent citizen must join with us in welcoming the appearance of this work. The need of a complete and correct system of geographical pronunciation, has long been felt by all classes of the community, and from a careful examination of the book before us, as well as from the ample testimony of a number of the most distinguished literary gentlemen in different parts of the Union, we entertain no doubt that the great desideratum has at last been effectually supplied.

The present work exhibits the clearest evidence of a scrupulous attention to accuracy in every part, and the high character of the authorities cited, both in the geographical and orthoepical department, cannot fail to increase the confidence of all respecting the great value and correctness of the Pronouncing Gazetteer. The book is necessarily of limited dimensions, to fit it for introduction into our common schools; it is however more comprehensive than many other gazetteers of much greater size. It contains a neat and handsome map of the United States, exhibiting the various canals and railroads up to the present date. To use the words of S. S. Randall Superintendent of Common Schools of this state, "the information brought together in this work, is exceedingly valuable, as well as varied and interesting; and I know of no other source from whence it can be so profitably and readily derived."

It must be a source of gratification that both the plan of the work and its execution are wholly original and American, and cannot fail to add to the reputation of American literature.

Farmer's Library and Monthly Journal of Agriculture.—Each succeeding number of this work comes to us with increased interest. The August No., a notice of which was crowded out of our columns, concludes the republication of Petzholdt's Lectures to Farmers on Agricultural Chemistry. The Journal Department contains many interesting articles, the first of which is a Dissertation on Horse-Breeding, and the Trotting Horse of the United States, prefaced by a lithographic portrait of the celebrated trotting mare *Lady Suffolk*. The second is an obituary notice of Gen. T. M. Forman, of Md., with a Curious History derived from him, of the importation of Lindsey's Arabian. Other articles follow on Under Draining, Irrigation, Entomology, Comparative value of different kinds of Sheep for the New York farmer, &c., &c.

The September number is decidedly the most interesting that has been issued. It commences the republication of The Principles of Agriculture, by Albert D. Thaer. From the attention we have been able to bestow, we think this a highly valuable work, evincing deep investigation and sound judgment on the part of the author. The articles in the other part of the work, are, A Brief Sketch of the Qualities of the Short-Horned Cattle, and their Introduction into Maryland, with a lithographic portrait of a bull of that breed; On the good and bad points of Cattle, and the formation of fat and muscle, by Mr. Read, V. S.; Sugar, its culture and manufacture; Comparison of Guano with other manures; Entomology; Silk Plant; Native or Wild Maize; Trials of Sulphuric Acid and Bones for Turnips. The frontispiece to this number is a beautiful colored engraving of the Cotton Plant in its various stages.

American Journal of Insanity.—This publication has just entered on its second volume. It is issued quarterly, each number containing 96 pages octavo. We have but just glanced at the first number of the current volume, (which is the only specimen of the work we have seen,) but notice that its contents are varied, and embrace articles on several interesting subjects—as "Historical and Descriptive Account of the Bloomingdale Lunatic Asylum," with a handsome engraving of that institution—"Modern Improvement in the Construction, Ventilation, and warming of Buildings for the Insane," —"Lunatic Asylums of the United States"—"Selected cases of Insanity"—"Progress of the Periodical Literature of Lunatic Asylums,"&c. The work is edited by the officers of the New York State Lunatic Asylum, and published by Bennett, Backus & Hawley, Utica, at one dollar per annum, in advance.

Medico-Chirurgical Review, for July, 1845.—This work comes as usual, well filled with articles of the greatest value. It is published quarterly, each number containing 288 pages octavo. The American edition is issued by Messrs. R. & G. S. Wood, 261 Pearl-street, New-York, at $5 per annum, in advance.

North Carolina Planter.—The two first numbers of this publication have reached us. It is an octavo of 24 pages, published monthly at Raleigh, N. C., at one dollar a year in advance. Edited by Thos. J. Lemay.

The two numbers we have received, are filled with interesting articles. We trust the work will be the means of arousing the farmers of North Carolina to the importance and profit of developing the rich natural resources of the state.

POPULAR LECTURES ON SCIENCE AND ART, BY DR. LARDNER.—We have received this interesting and very valuable work, up to the ninth number. Each number is well worth twice the price for which it is sold. The eighth and ninth Nos. contain articles on the Effects of Lightning—Popular Fallacies—Protection from Lightning—Magnetism—Electro-Magnetism--The Thermometer—Atmospheric Electricity—Evaporation, &c. Published by GREELY & MCELRATH, Tribune Buildings, New-York. Twenty-five cents.

TRANSACTIONS OF THE N. Y. S. AG. SOCIETY.

The Editor of "The Cultivator" had determined to take no notice of the various attacks, (criticisms they cannot be called,) which have from time to time been made upon the annual vol. of Transactions issued by the N. York State Agricultural Society; and he is only induced now to refer to them, by the very ungentlemanly manner in which the name of one of the best agricultural writers and most estimable men of our state, has been brought before the public in connection with the last volume. It may not be improper to state that the 1st and 2d vols. of the Transactions were prepared for the press by the editor of this paper. That they are not what he could have desired they should be, he very cheerfully admits; but that better volumes could be made from the materials submitted to him, by any one, he does not believe, though his labor upon them, as well as all his labors in behalf of the society, for three years, were bestowed without fee or reward. The preparation of the 4th vol. of Transactions was also assigned to the editor of the Cultivator. On looking over the papers in his hands, he came to the conclusion that a decided improvement might be made in the arrangement and preparation of the matter; but not choosing to make the improvements which he deemed necessary, on his individual authority, he submitted his plan to the Executive Committee, by whom it was unanimously approved; and at his request, a committee was associated with him, consisting of Hon. J. P. BEEKMAN, the last President of the Society, and Dr. LEE, the Cor. Sec'y, to superintend, so far as it might be necessary, the preparation of the copy for the volume. Among the improvements, it was proposed to exclude, so far as possible, all matters not of permanent value, and to arrange all the papers, whether emanating from the state or county societies, under appropriate heads. In this arrangement, the Executive Committee and the Committee of Publication, unanimously concurred. To make the compilation as it should be done, the editor found would require more time than his duties would admit of his devoting to it: he therefore engaged JOHN J. THOMAS, a gentleman every way admirably qualified for the task, to perform this labor, which he did to the entire satisfaction of the Executive Committee. Mr. Thomas, it may be proper to say, had no authority to insert or omit any article, he merely acting as compiler under the direction of the Publishing Committee, by whom his labors were unanimously approved. The imputation, therefore, that Mr. Thomas had any part in rejecting the contributions of others to make room for his own, is as destitute of truth as it is scandalous on the part of the writer making it, who must have known, if he knew any thing about it, that Mr. T.'s contributions to the volume consisted of Prize Essays, the premiums for which were awarded by committees appointed by the Executive Board, who made their awards without the knowledge of the writer's names. From the entire mass of papers submitted to him, every thing was selected which was deemed of permanent utility; and as to these papers *alone*, could the editor have recourse, he could by no possibility have made the volume better; and, with the exception of a few grumblers, it has received the approbation it deserved. Those who complain that the volume does not compare with the Journal of the Royal Agricultural Society, would do well to remember that we have as yet no class of professional writers in this state, or in this country, who have given sufficient attention to the theory or practice of agriculture, to enable them to furnish such essays as grace many of the pages of the journals of the Royal and Highland Societies. We can expect little more at present than the simple details and practical observations of men who have paid more attention to the labors of the husbandman than to those of the student of nature. From the attention now given to the subject, however, we may look for a gradual and a rapid improvement in our agricultural literature.

PLANTING CHESTNUTS

The rapid growth of the chestnut, the excellence of its timber, and its fine ornamental appearance, render it a desirable object of cultivation. The fruit which it produces too is not the least consideration.

Many, however, who attempt raising the trees, partially or wholly fail in causing the seeds to germinate. This is usually owing to the seeds becoming *dry* before they are planted. A few days exposure to dry air is sufficient to prevent their growing. Hence, as soon as they are taken from the tree they should be at once planted before drying a day, or mixed with moist sand, and kept in that condition till planted. They should not be covered more than an inch and a half deep if the soil is heavy, nor more than two inches if it is light; but a still better way is to plant them half that depth, and then spread on a thin covering—say one inch of peat, or rotten leaves, which will keep the surface soft and moist.

It must be remembered that mice are exceedingly fond of the nuts, and if planted near grass lands, or other places frequented by mice, the young plants will be missing the next season.

PITT'S CORN AND COB-CUTTER.

In our August No. we briefly mentioned this machine. Mr. Pitts has recently exhibited it in this city, and we have had an opportunity of examining it more particularly. It seems to us completely adapted to its purpose. Its advantages are—1. Great simplicity of construction; not being liable to get out of order, but in case of injury, readily repaired. 2. Portableness; occupying less space than the common grind-stone used by farmers. 3. The facility with which it will grind corn and cob in any condition; its peculiar construction enabling it to work equally well whether the corn is in a damp, green, or dry state. 4. Its adaptedness to grinding shelled corn, coffee, peas, or beans, without any alteration or change of gear. 5. The grain is not heated in being ground; thus obviating the tendency of the meal to sour or ferment.

It does not make *fine* meal, but it is fine enough for any description of stock, and is indeed, we believe, about as fine as corn-meal is preferred for ordinary domestic purposes at the south. It is readily adapted to any power. With one horse, one man will easily grind six bushels an hour—though twelve bushels an hour have been ground with the same force. They will soon be for sale in Albany, Boston, New-York, Philadelphia, and Baltimore. Address H. A. PITTS, Winthrop, Maine, or JOHN A. PITTS, Rochester, N. Y.

DEEP PLOWING.

We have occasionally urged the importance of deepening the soil, by turning up and mixing with the surface, small portions of the subsoil, where its nature is such as to produce beneficial effects. We have known many instances of the beneficial effects of such a course. Dr. D. H. Robinson, of Farmington, Ontario Co., N. Y., being compelled to prepare a piece of grass land for wheat, late in summer, plowed it very deep, not less in any place than eight inches, but averaging nine or ten inches. This was thoroughly harrowed, with a small dressing of rotted manure, and sowed upon the inverted sod. The product was thirty-five bushels per acre, on land where twenty bushels are usually considered a heavy crop. Another very skilful farmer of our acquaintance, finds so much benefit from the mixture of the subsoil, that he considers a decided advantage would result, so far as raising wheat is concerned, if six inches of the surface of his land were entirely removed and carried off.

Subsoil plowing would doubtless be useful in such cases to a certain extent; but we would more particularly recommend thorough *trench* plowing—one plow to follow the first, so as to loosen and throw up the soil to the depth of at least one foot,—the last team to be double and attached to a strong plow.

BENEFITS OF AGRICULTURAL FAIRS.

An immense interest is evidently awakened throughout the country in favor of these meetings, and it is only necessary that they be properly conducted, to ensure their great and permanent usefulness.

There are, or may be, important advantages of a social, may we not be permitted to say *political* nature, connected with these annual gatherings of those devoted to the agricultural interest. A free and familiar intercourse should be had by farmers, on all topics connected with their calling. The various modes of protecting and advancing this interest—the most important of all interests, both in a national and individual sense—should be freely discussed and understood. As no other opportunity is more favorable, let the great meeting of the New-York State Agricultural Society, be made an annual Agricultural Congress, where the ways and means of advancing the cause of agriculture and the interests therewith connected, shall be fully considered. Let this plan be adopted and continued, till an union of feeling and concert of action among this class, shall cause their influence to be felt and *answered* in our national councils! till the farmer shall receive from our legislative bodies the respect to which his acknowledged usefulness entitles him!

From the advantage which these shows afford for the sale or exchange of animals, the purchase of implements of husbandry and articles of every description, it is very desirable that the feature of *fairs* should as far as possible be incorporated into the general system of agricultural associations. To all classes it would be convenient, but to purchasers and breeders of stock, the opportunity of comparing the merits of different breeds, herds, and particular animals, and obtaining by purchase or exchange, such as each one needs to carry forward his improvements, would be of incalculable benefit. If, for instance, the show of the New-York State Society could be permanently located at some point easily accessible, the purchasers and sellers of all kinds of stock, from a large portion of the country, would resort thither in crowds; and the longer the system was continued, the greater would be its advantages, and the greater would be the numbers annually drawn together.

We have been induced to make these latter remarks, from knowing that numerous sales of stock and implements took place at the late exhibition at Utica. From what we saw and heard, we have reason to believe that sales were effected at this exhibition to a much greater extent than at any previous one: indeed, we are informed by those whose position enables them to possess correct information on this subject, that the sales made at this time, were more extensive than at all previous shows of the society included. Sheep, of both fine and long-wooled breeds, were purchased for various sections of the country, from Maine to Mississippi. Horses were purchased for different sections—the pair of matched or carriage horses which took the first premium, being bought by Mr Gilmor, of Maryland. Cattle of various breeds, also, changed owners to a considerable extent, and at fair prices.

The *Tribune* suggests another improvement in conducting these fairs, to which we cordially respond, viz: that "there be a succession of off-hand, farmer-like addresses, by all who shall be deemed able and shall avow themselves willing to shed light on any department of agriculture." By having suitable men engaged beforehand, to speak on various subjects—as stock of different kinds, cultivation of different crops, manures, &c., we have no doubt that a great amount of information of the most practical and valuable kind, would be elicited. We hope to see these suggestions carried out, and the usefulness of the society perfected and extended to the utmost limit.

FOREIGN.

By the latest arrival we have our foreign exchanges to the first of September. It seems to be well established that the wheat crop of Great Britain will prove a full average. The harvest was very late, owing to the prevalence of cold and wet weather. Much of the grain was beaten down in the fields, and great anxiety was at one time experienced lest it should be injured by sprouting; but it is stated that the expected losses in this particular are not of a serious nature. Numerous accounts are given of the injury to the potatoe crop by the *rot*, which by the description seems to be similar to the disease from which so much damage has been experienced in this country for the last few years. Throughout the kingdom there appears to be plentiful supplies of hay and pasture herbage; by which the graziers are considerably benefitted, and stock has been brought into fine condition. Advices from Scotland and Ireland are favorable to the yield of wheat, barley and oats.

Dr. Dana's Essay on Manures.—We notice that this valuable paper is copied at length into the London Farmer's Magazine. It is a sterling production, and we are pleased to see that it is appreciated on the other side of the water.

TRANSPLANTING APPLE TREES.

All hardy fruit trees, more especially apples, will bear a considerable portion of manure in the soil, provided it has previously been well intermixed with the soil and thoroughly rotted.

A very successful experiment was made two years ago by the writer, the results of which are now very striking, by digging very large holes for apple trees, and filling them with a mixture of soil and rotted manure. A thorough intermixture of the soil and manure was effected, as they were gradually filled in, by means of a large toothed iron rake. The holes were about seven feet in diameter, and a foot deep. In setting out the trees, common garden earth only was placed in contact with the roots, consequently the effect of the mixed rotted manure was not visible the first year. The present year, however, its influence has been most obvious in the rapid growth of the shoots, and in the uncommonly dark and rich hue of the large and luxuriant foliage.

It is hardly necessary to add that the soil as a matter of course was kept clean and in a mellow state, and that the trees were tied to an upright stake, driven into the hole before filling, to prevent shaking and loosening by the wind.

STATE OF THE CROPS.

Connecticut.—Mr. J. S. Yeomans, Columbia, under date of Sept. 1, says—"The grass crop was not an average; oats good; corn will be injured some by drouth, but I think there will be more than an average crop."

Canada West.—Mr. J. B. Bagwell, near Toronto, writes that winter wheat turned out well—20 to 40 bushels per acre—25 bushels being the general average of the neighborhood. Quality good. Spring wheat light—injured by rust—not more than 15 to 20 bushels per acre, but gave straw enough for 25 to 30 bushels. Italian spring wheat is on the whole the best of the spring varieties for that section. It is a week or ten days earlier than the other varieties. Oats very short, hay light—no rain of consequence since the middle of June. Early potatoes a failure—late ones may do better if frost holds off. Peas not an average. Corn nearly worthless. Fruit of all kinds scarce, being mostly killed by frosts in May.

Potatoes had better be dug as soon as possible. Turnips, cabbages, &c., may stay in the ground till Nov.

LIST OF PREMIUMS,

Awarded at the New York State Fair, Utica.

[Continued from page 318.]

FLOWERS.

Greatest variety and quantity, Fred. W. Boyce, Utica,	Gold Medal.
2nd do. do., Ellwanger and Barry, Rochester,	$5
3d do. do., Mrs. Prof. Jackson, Schenectady,	Vol Tr.
Best Floral Ornament, F. W. Boyce, Utica,	Silver Medal.
2d " " Mrs. Lyndes, "	$3
3d " " Ellwanger & Barry, Rochester,	Vol. Tr.
Best seedling Dahlia, F. W. Boyce, Utica,	$3
" 25 varieties Dahlias, Mrs. Prof. Jackson, Schenectady,	5

DISCRETIONARY.

12 beautiful Dahlias, I. H. Chedell, Auburn,	$2
Collection rare Flowers, Mrs. Lawrence, Utica,	Vol. Tr.
Do. do. Mr. J. E. Hinman, Utica,	do.
Do. do. Mrs. Benjamin, "	do.
Lemon Tree, &c., &c., S. D. Childs, "	Col. Tour.
Rare plants, &c., J. B. Marchesi, "	Vol Tr..

Premiums on Flour.

John Rowling, Jr., Manlius, good,	Dip.
Jno. Williams, Rochester, better,	$3
J. G. Rowling, jr., Manlius, best,	5
Baily, Wheeler & Co., Utica, Air Tight Parlor Stove, 1st pr.,	"
E. Tyrrel & Son, Utica, Atwood's Empire Cooking Stove, 1st premium..	Dip.
Robinson and Vanderbilt, Albany, four light pleasure wagons,	"
D. A. Lyons, Utica, light pleasure wagon,	$3
Wm. Little, Edwards, double acting bellows,	Dip.
Cha's Pope & Co , Syracuse, plating	"
O. Reynolds, Webster, best beehive,	"
Bailey, Wheeler & Co, Utica, air tight parlor stove,	Dip.
Ray & Madole, Norwich, Chenango county, steel hammer, good workmanship,	Vol. Tr.
Thomas Potter, Utica, knitting and lace machines, very ingenious articles,	Dip. and Vol. Tr.
Benjamin S. Walcott, Agent of the N. Y. Mills, presented a number of pieces of corded dimity, bleached shirting, twilled jeans, French (pantaloon,) plain and corded skirts; articles which were of superior excellence,	Dip.
Mrs. H. Rhodes, South Trenton, Oneida county, a box of butter elegantly wrought into representations of various implements,	Dip.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, September 22, 1845.

COTTON.—Upland and Florida—inferior, 6¾a7—fair and good fair, 8½a9. Mobile and New Orleans,—inferior, 6¾a7½—fair and good fair, 9 to 9½a10. According to the Tribune,

"Total sales for the week ending this evening,	7,500
" " since the 1st inst.,	14,000
" Receipts, "	7,200
Stock on hand this day,	35,000"

BUTTER.—Western, 11a14—Goshen, 18a25.

CHEESE—5½a7.

FLOUR—Michigan and Ohio, $4.37½a$4·50—Genesee, $4.75a $4.81¼.

GRAIN—Wheat, Genesee, $1.03½—barley, 67 cts.—corn, southern, 63 cts.—oats, 41a42 cts.

HEMP—Dew rotted, American, per ton, $90—Sisal, $130.

HOPS—per lb. 13a15 cents.

HAMS—scarce, 8½a9 cts.

BEEF—Mess, $9.

LARD—8a8½—firm and wanted.

PORK—mess $11a$14.

TOBACCO—Kentucky, per lb. 3 cents—Connecticut seed leaf, 8a10.

WOOL—(Boston prices.) Sept. 22:

Prime or Saxony fleeces, washed per lb.	$0.37a0.40
American full blood fleeces,	35a0.37
" three-fourths blood fleeces,	33a0.34
" half blood do	31a0.32
" one-fourth blood and common,	28a0.30

Water for Calves.—A correspondent of the Ohio Cultivator, speaks a kind word for *such calves* as cannot speak for themselves, and says they need a supply of good water and partake of it freely, even if liberally and constantly supplied with milk.

STODDARD'S STRAWBERRY.

PERSONS wishing to obtain the Seedling Strawberry noticed in the Cultivator for August last, p. 251. can obtain them by addressing Col. J. S. Stoddard, Palmyra, Wayne Co., N. Y. Price, $5 per 50 plants. They can be sent by Express to any part of the country.

MACEDON NURSERY.

THE partnership formerly existing between Thomas & Smith, having been dissolved, orders for fruit trees will be received by J. J. THOMAS, Macedon, Wayne Co., N. Y.

A thorough revision of his list of fruits having taken place, and new ground extensively occupied, trees of many varieties can be furnished of only small size before another year.

RENSSELAER INSTITUTE.

A PRACTICAL, SCIENTIFIC, AND MATHEMATICAL SCHOOL.

THE winter term of this institution will commence on Wednesday, the 5th of November next. The course of studies pursued is still the same with that pursued when under the charge of Prof. Eaton, with the addition of Theoretical Mathematics.

The following is a brief view of the branches pursued in the Institute.

1. Theoretic Mathematics.
2. Practical Mathematics with special application to Surveying, Navigation, and Civil Engineering.
3. Natural Philosophy, including Mechanics, Hydrostatics, Hydraulics, Pneumatics, Optics, Electricity, and Magnetism, with their applications.
4. Chemistry, exerimental and practical. This science will be taught and illustrated with particular reference to Agriculture and the Arts.
5. Natural History, including Botany, Geology, Mineralogy and Zoology.
6. Occasional lectures will be given on subjects pertaining to Taste, Morals, and the Christian Religion.

Besides the courses of lectures by the Faculty, each student is required to give lectures on the branch of science which he is pursuing, illustrating his subjects—in Mathematics and Natural Philosophy by surveys, measurements, observations, or experiments of his own—in Chemistry with experiments performed with his own hands—and in Natural History, as far as possible, by specimens of his own collection; and he thus acquires theoretic and practical knowledge, as he is explaining it to others. In this method of instruction it is hardly possible for a person to pass through the appointed lectures, illustrations and experiments, without attaining an intimate and familiar acquaintance with the studies prescribed. The learner becomes himself the teacher, and he must first learn in order thus to explain his subject to others.

Rev. N. S. S. BEEMAN, D. D., Prest.
WM. P. VAN RENSSELAER, } V. Pres'ts.
Hon. DAVID BUEL, }
GEORGE H. COOK, } Professors.
JOHN WRIGHT. M. D., }

The price for tuition will be $15 per term—two terms in the year—one commencing on the first Wednesday in November, and continuing 20 weeks, and the other commencing on the first Wednesday in May, and continuing 22 weeks. Those who perform a course of experiments with their own hands, are charged $8 extra for chemical substances and apparatus, unavoidably destroyed.

Board can be had from $2 to $2.75 per week.

Oct. 1, 1845—2t.

FARMS FOR SALE.

FIVE FARMS in Loudon county, Virginia, will be sold at public auction on the premises, at noon, the 25th day of October next.

These farms are portions of the estate called "Oak Hill" in Loudon County, the late residence of Ex-President Monroe, deceased; are about 30 miles distant from Alexandria, Georgetown, and the city of Washington, and about 9 miles from the banks of the *Potomac* and the *Chesapeake and Ohio Canal*, where there is every facility for cheap transportation of produce to tide water.

Farm No. 1, contains 200 acres, more or less, and is now occupied by Joseph Hawkins; on it is a frame dwelling-house and sundry other improvements, several good springs, and running water through its whole extent, with a fair proportion of arable, meadow, and woodland bordering on *Little River*.

No. 2, is generally known as Boggins' Farm, and is of size to suit a purchaser. It contains 60 acres of superior meadow land, and a fair proportion of arable and woodland, with *Little River* passing through it.

No. 3, lies between the farm occupied by Mr. Hawkins, and that on which Capt. Mattocks resides. It consists of 200 acres, more or less, about 150 of which are cleared and arable, the balance well timbered land.

No. 4, contains from 250 to 350 acres, more or less, at the option of the purchaser. It lies south of Farm No. 1; 100 acres of it being arable, the balance consisting of wood land, and a fine meadow lying on *Little River*.

No. 5, is composed of 200 acres, more or less, of *red land*, lying directly upon the *Alexandria and Winchester Turnpike*, having upon it a comfortable *dwelling house*, two wells of pure water, together with a *barn* and a *brick wagon stand*. The two houses, independent of the land, rent for $85 per annum. This property bordering as it does on the main road and stage route to Alexandria and Washington, offers great inducements. It is admirably adapted for grazing cattle, being most excellent grass land.

These farms are composed of good soil, capable of great improvement, and producing good crops of *Wheat*, *Corn*, *Rye*, *Oats*, *Potatoes*, *&c.*, *&c.*, They are superior lands for the purpose of grazing cattle, and as Stock Farms.

The terms of sale will be most favorable, say *one-fourth* down, and the balance in one, two, and three years, with interest.

Further description is deemed unnecessary, it being presumed all who wish to purchase, will examine for themselves.

Offers for any of the above property will be received till the day of sale, and any further information afforded on applicaton, in person, or by letter to the subscriber. S. L. GOUVERNEUR.

Washington, D. C , Sept. 15, 1845 —1t

BOOKS FOR SALE.

AMERICAN Farmer's Encyclopedia, price $4—Skinner's Cattle Doctor, price 50 cents, and a variety of other works, for sale at the office of "The Cultivator."

SHORT HORN DURHAMS FOR SALE.

9 HEAD of this valuable breed of animals are now offered for sale by the subscriber, having more than he can well keep on his farm, viz: Rose, 9 years old, a good milker, having given 25 quarts per day, on pasture only. She is in calf by my prize bull Meteor, and will drop her calf about the middle of August. Empress, nearly as good a milker as Rose. She dropped her calf about a month ago, and will be bulled by Meteor. Eunice, 5 years old, white, bulled by my imported bull Duke of Wellington, 25th of June, a good milker; her dam has given 32 quarts of milk a day on pasture only. Julia, four-year-old heifer, recently bulled by Meteor. Lily, two-year-old-heifer, white, bulled by Meteor, 9th of June, and three yearling heifers, roan, red, and white, got by Wellington and Meteor. A yearling bull, got by Meteor, out of a cow bred by Charles H Hall, Esq., of Harlem. The Cows above named were bred by the Bullocks, of Albany county, and their descendants. This stock has the reputation of being good milkers. Gentlemen desirous of procuring the blood of the celebrated herd of Thomas Bates, Esq., of Yorkshire, can do so, with a cross of the Bullock stock, as the sires of the young animals are from that gentleman's herd, and the cows are in calf by the same bulls. This strain of blood can hardly fail to make good milkers. Letters, post paid, will receive an answer. The animals will be sold from $100 to $125 a head. A credit from 6 to 12 months will be given for approved paper. GEO. VAIL.

Troy, July 25, 1845—2t.

FARM FOR SALE.

THE subscriber offers for sale the farm upon which he now resides, situate in the village of Auburn, in the county o Cayuga, and containing 100½ acres.

This farm lies upon the south side of the western turnpike, (now Genesee-st., Auburn,) and is well known as having been the residence of Hon. Nathaniel Garrow, deceased, for many years.

The buildings, fences and other erections thereon, are ample and in good repair; the soil will vie with that of any other farm in Western New-York, for fertility, variety and earliness of vegetation. Great attention has been paid as well by the former as also by the present owner, to the selection and cultivation of choice fruit, and there is now upon the farm, in full bearing, a great abundance of the best varieties of apples, pears, cherries, peaches, grapes, &c. &c. The farm is well watered, durable springs. which give a never failing and ample supply.

The location is believed to be as desirable as that of any other arm in the state, as well for farming purposes as also for the residence of the gentleman or a man of business, being withing a few minutes walk from the Rail Road Depot, and within a few rods of the Female Seminary.

A credit will be given, if desired, for a large portion of the purchase money, for a term of years upon payment of interest annually. Inquiries may be made of the subscriber upon the premises, of Luther Tucker, Esq., Editor Cultivator, Albany, or of David Wright, Esq, Auburn. JOHN REMER.

Auburn, N. Y., July 14, 1845.—3t.

A LAKE FARM FOR SALE.

THE subscriber offers for sale the Farm owned by Hon. Jedediah Morgan at the time of his death, situate on the east side of, and adjoining, the Cayuga Lake, about two miles south of the village of Aurora, in the town of Ledyard, (formerly Scipio,) containing about 360 acres, with a good porportion ot Timber Land, on which he oak and hickory predominate. The road leading from Auburn, to Ithaca, via Aurora, passes through the Farm, dividing it into two nearly equal parts.

The land is of an excellent quality, as well for wheat and other grain as also for grass.

The situation and location is believed to be as eligible, and to combine as may advantages, as any other farm in the county. The first point of land which makes into the Cayuga Lake, above the village of Aurora, is a part of the farm.

A large proportion of the purchase money can remain, secured by bond and mortgage, upon annual interest. Any person wishing to view the farm, can do so by applying to C. C. WHITE, the tenant upon the premises. The whole will be sold together, or in parcels. to suit purchasers. Letters of inquiry addressed to the subscriber, *post paid*, will be promptly answered.

DAVID WRIGHT,
Trustee of the Estate of Jed'h Morgan, dec'd.

Auburn, July 14, 1845.—August 1—3t.

NEW AND IMPROVED POUDRETTE,

MADE by the Lodi Manufacturing Co., may be had by application at the office of the Company, No 51 Liberty-street, New-York, or by addressing a letter (post paid) with directions how to ship, &c., to "The Lodi Manufacturing Co., New-York." The price for it, delivered anywhere in New-York city, free of cartage, &c., is as follows: For one barrel, $2.00; for two bbls., $3.50; for three barrels, $5.00; four barrels, $6.68; five barrels, $8.00; six barrels, $9.75; and for any quantity over six barrels, $1.50 per barrel. Pamphlets and instructions for its use, may be obtained gratis at our office.

The Lodi Manufacturing Co., defy competition in the art of making a *cheap, powerful*, and *lasting* manure, and strenuously invite a fair trial between *an equal cost* of their poudrette, and an equal cost of the best guano in existence.

It is hoped that the successful trial of poudrette upon wheat, on Long Island, the last season, will encourage many others in other parts of the country, to make a trial of its effects this season. Quantity per acre for wheat is 10 barrels, or 40 bushels sown broadcast with the seed, and harrowed in.

Sept. 1—2t.

NEW-YORK AGRICULTURAL WAREHOUSE.

HAVING taken the commodious store, No. 187 Water street, the subscriber is now opening the largest and most complete assortment of Agricultural implements, of all kinds, ever yet offered in this market. Most of these are of very highly improved pattern—warranted to be made of the best materials—put together in the strongest manner, of a very superior finish, and offered at the lowest cash prices.

Seeds for the Farmer.

Such as improved Winter and Spring Wheat, Rye, Barley, Oats, Corn, Ruta Baga, Turnep, Cabbage, Beet, Carrot, Parsnep, Clover, and Grass seeds, improved varieties of Potatoes, &c., &c.

Fertilizers.

Peruvian and African Guano, Poudrette, Bonedust, Lime, Plaster of Paris, &c.

Fruit, and Ornamental Trees and Shrubs.

Orders taken for these, and executed from a choice of the best nurseries, gardens, and conservatories in the United States.

Horses, Cattle, Sheep, Swine, and Poultry.

Orders executed for stock of all kinds to the best advantage.

Wire Cloths and Sieves.

Different kinds and sizes of these constantly on hand.

The subscriber requests samples sent to him of any new or improved implements, seeds, &c. &c., which if found valuable, extra pains will be taken to bring them before the public.

A. B. ALLEN, 187 Water-st., New-York.

Sept. 1—2t.

FRUIT TREES.

THE subscribers are now ready to receive orders for *superior Fruit Trees*, viz: Apples, Plums, Pears, Cherries, Peaches, Quinces, &c., &c., from *their new and extensive nursery*, Their assortment, which they offer for sale the coming fall, is very large and fine. The trees are handsome, thrifty, and of the most suitable size and age for transplanting, and being propagated by the proprietors themselves with the most scrupulous care, either from bearing trees in their own grounds, or from others of undoubted genuineness, and being in every other respect until they are sent from the nursery, under their *immediate personal supervision*, they can be confidently recommended.

It is expected that all orders coming from persons unknown to the proprietors, will be accompanied by a remittance, or that some responsible reference will be given. Orders are entered on the order book, to be forwarded as soon as practicable in the fall. Orders respectfully solicitied, and will receive prompt attention.

WILSON, THORBURN & TELLER, or
WM. THORBURN, Seedsman, 38 Broadway,

Albany, *Sept.* 1—3t.

☞ A liberal discount made to those who purchase to sell again or by wholesale.

FAN MILL AND CRADLE MANUFACTORY.

THE subscribers continue to manufacture Fan Mills and Grain Cradles of the very best quality. The subscribers have recently improved their Fan Mills, so that wheat and all other kinds of grain and seeds are thoroughly cleaned by being run through the mill once. Said improvement has been secured by letters patent, bearing date the 10th day of July, 1845.

Notwithstanding the labor and expense which we have bestowed upon the improvement of our Fan-Mills, we are enabled to furnish the "Patent Fan-Mills" at the same prices which we have received for mills heretofore manufactured by us.

We manufacture four different sizes of Fan-Mills, seven sieves to each mill. Prices from $21 to $27. according to size.

Orders from abroad promptly filled, and a liberal discount to dealers.

I. T. GRANT,
D. H. VIALL.

Schaghticoke, Junction P. O., Rensselaer Co., N. Y.

We the subscribers certify that we have witnessed the operation of I. T. Grant & Co.'s "Patent Fan-Mill," upon wheat and all kinds of grain and seeds, and have no hesitation in pronouncing it superior to any mill now in use. The operation of cleaning wheat is performed with one-half the time and labor required by other mills, as it chaffs and screens at the same time. All kinds of grain and seeds are thoroughly cleaned by being run through the mill once. We cheerfully recommend. and advise all farmers who wish to purchase a fan-mill, to purchase the "Patent Fan-Mill" manufactured by I. T. Grant & Co.

John M. Mott,
L. D. Eddy,
Cha's J. Wilber,
James H Rice,
Moses Buckley,
P. G Williman,
Calvin Morse,
James H. Jones,
H. K. Duer,
John Case,
Henry P. Stuntz,
Philip H. Stuntz,
Edwin Smith,
James G. Gordon,
George W. Corry,
Francis Crocker,
Wm. B. Gordon.

I know little of the utility of the fan-mill above described except from information. I am, however, personally acquainted with almost every one of the above subscribers, and have no hesitation in saying that the most implicit confidence may be reposed in all they certify. JOB PIERSON.

I am intimately acquainted with the Hon. Job Pierson, who has signed the above certificate. He is a highly respectable man. (formerly member of Congress,) and I have great confidence in him.

W. L. MARCY.

For sale at WARREN'S, in Troy. WM. THORBURN'S, Albany, and D. L. CLAWSON'S, 192 Water-street, New-York.

Sept. 1—3t.

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☞ **ADVERTISEMENTS inserted in the Cultivator, at $1,00 per 100 words for each insertion.**

FINE WOOLED BUCKS FOR SALE.

SEVERAL Bucks, of various ages, and of the best quality, both for fineness and weight of fleece, as well as for shape and constitution, can be had if applied for soon. A part of them are *pure* Merino, and a part a cross of the Merino and Saxon. Address, *post-paid*, SANFORD HOWARD,

Albany, Oct. 1. Office of the Cultivator.

SEEDLING APPLE-TREES FOR SALE,

BY J. J. THOMAS, at his Nursery, Macedon, Wayne Co, N. Y., one year old, and from 5 to 10 inches high, at $3 per thousand No charge made for packing, for orders of 5000 each; or 60 cts. per 1000 for less. Orders to be post-paid and accompanied with remittances.

Oct 1—1t.

MACEDON NURSERY.

THE unsettled accounts of the late firm of Thomas & Smith, Macedon, are left with the subscriber.

The original object of this establishment, viz: "the propagation of select varieties of *Proved* Fruits only," will be rigidly adhered to.

It is gratifying to be able to state that an extensive collection now coming into bearing, has enabled me to add several kinds of great value to the stock before cultivated, which in due time will be offered for sale. WILLIAM R. SMITH.

Macedon. Wayne Co., 8 *mo. 25th*, 1845.

BRINKLEYVILLE ESTABLISMENT.

THE subscriber offers in market, most articles in the nursery line, as fruit trees, &c., to suit more especially, southern latitudes. But his large number (especially of the Scuppernong,) of choicest American grape vines, he hopes will accommodate those desirous of speedy success in fine profitable vineyards. Medium prices of well rooted vines from 15 cts to 75 cts. each, according to kinds, size, and numbers taken at once. Cuttings from 25 to 60 cts. per dozen. Early planting important south. Wines from 25 cts. to 75 cts. per bottle, and from $15 to $50 per barrel, according to quality and age. Cordials higher than wines. SIDNEY WELLER.

Brinkleyville, Halifax Co., N. C., Oct. 1—1t

SALE OF VALUABLE STOCK.

I WILL offer at public sale, at my farm, 5 miles from Baltimore, on the 30th day of October, at 10 o'clock A. M., the following valuable stock, consisting of two full bred Holstein Bulls, 4 and 2 years old: one imported Holstein Cow: two full bred Heifers, (Holstein,) 3 and 1 year old; 5 Heifers, ¾ Holstein, giving milk: 3 heifers, ½ Holstein, giving milk; 12 *half breed* Holsteins, good milkers. E. KENLY.

Oct. 1—1t.($1)

PLOW CASTINGS FOR CASH.

THE undersigned has just received the agency from a large and well known manufacturer to sell his plow castings, and is enabled to offer them at a lower price than ever sold in this market, for cash or approved paper. Southern dealers and others supplied at short notice. JAMES PLANT.

New-Yok, Oct. 1—1t. 5 Burling slip.

FRUIT TREES.

THE subscriber offers for sale, at the *Kinderhook Nursery*, an unusually fine assortment of Fruit Trees, comprising the choicest varieties of Apples, Pears, Plums, Cherries, Peaches, &c, now cultivated.

The trees are of good size and exceedingly thrifty. The stock of Cherries, Peaches, and Apples, particularly, is very large, and of beautiful growth.

Also on hand, an excellent stock of Ornamental trees, comprising European Mountain Ash, European Linden, Evergreens, &c., &c.

Also, stocks and seedling trees.

Catalogues will be furnished gratis to all applicants It is particularly requested that all orders be forwarded as early as possible, say by the 15th of October, so that they may be executed as soon as the season will admit.

Trees packed in the very best manner, and delivered at the Kinderhook Steamboat Landing, or Railroad Depot, free of expense.

Kinderhook, *August* 14, 1845—1t* HENRY SNYDER.

ALBANY AGRICULTURAL WAREHOUSE AND GENERAL AGRICULTURAL AGENCY.

23 Dean-street, Albany, N. Y.

THE undersigned will open on the 1st of October, a warehouse for the sale of every variety of improved farm implements both at wholesale and retail. He intends to make his warehouse a general depository of the best implements manufactured in this and other states, and confidently believes that his experience of many years as a practical farmer, and for the last few years as proprietor of an agricultural store in Rome, N. Y., together with his general acquaintance with manufacturers of farm implements, will enable him to select the best articles in use. Particular attention will be given to the sale of seeds of every description. Persons having valuable implements or choice seeds to dispose of, are invited to deposit them here for sale. The store may be found in the new building, No. 23 Dean-street, adjoining the store of Vose & Co., in the rear of Stanwix Hall. It is also within a few steps of the Mohowk and Hudson, and the Boston Rail-Road offices. ELON COMSTOCK.

Oct. 1, 1845.

PRINCE'S LINNÆAN GARDEN AND NURSERIES,

Flushing, L. I., near New-York.

THE GREAT ORIGINAL ESTABLISHMENT.

THESE Nurseries are not only the largest in the Union, covering near 60 acres, but the collection of Fruit and Ornamental Trees, and Plants, is the *most extensive and select* in America, being the result of investigation during a century. The specimen grounds comprising 1700 trees from which the Nurseries are ingrafted, thereby ensuring their accuracy. The collection contains more than 500 *new and rare varieties* of fruits, and above 1000 rare varieties of flowering shrubs, and roses, that are in no other nursery. The new descriptive Catalogues, with reduced prices, and directions for culture, will be sent to every post-paid applicant, and all orders will be executed with that accuracy and dispatch which characterize the establishment. The public are cautioned against a spurious use of our name and title, by an Attorney at Law, named Wintes.

Oct. 1—1t. WM R. PRINCE & Co.

MOUNT HOPE BOTANIC GARDEN AND NURSERIES, ROCHESTER, N. Y.

THE subscribers respectfully announce to their friends and the public, that their present stock which they offer for sale the ensuing fall of 1845, and spring of 1846, is the finest ever grown in Western New-York, and unsurpassed in quality by any establishment in the country.

The collection of fruits comprises the most esteemed varieties of the Apple, Pear, Peach, Plum, Quince, Cherry, Apricot, Nectarine, Almond, Grapes, &c.

Pears on Quince Stocks intended for growing in the pyrimidal form, and will bear the year after transplanting; they may be planted from six to 8 feet apart, and are consequently admirably adapted for garden culture.

Three thousand trees of the valuable native apple, the "*Northern Spy*," are yet on hand, generally acknowledged to be one of the best varieties cultivated.

Strawberries, all the celebrated new varieties, including *the remarkably large and productive new seedling* "Stoddard's Washington Alpine."

Gooseberries and currants, of the largest and finest varieties.

Raspberries of all kinds.

The collection of Roses is very fine, including a very choice assortment of standard or tree roses, 4 to 6 feet high; these are beautiful objects for lawns or borders—most of them are perpetual or ever-blooming.

Also a large collection of *Ornamental Trees and Shrubs*.

The trees are well grown, thrifty, and beautiful, and have been propagated with such care as to ensure correctness. All are warranted genuine as represented.

A new descriptive catalogue is in the course of preparation, and will be forwarded *gratis* to *all post-paid* applications.

Trees and plants packed in the best style, and shipped to any port or place that may be designated.

Oct. 1—1t. ELLWANGER & BARRY

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES.

VOL. II. ALBANY, NOVEMBER, 1845. No. 11.

THE CULTIVATOR

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LUTHER TUCKER, EDITOR AND PROPRIETOR.

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☞ "The Cultivator" is subject to newspaper postage only.

Foreign Correspondence.

MR. NORTON'S LETTERS—No. XVII.

Laboratory of Ag. Chemistry Association,
8 Bank-st., Edinburgh, Aug. 20, 1845.

L. TUCKER, Esq.—I have just been reading the proof sheets of an article of Prof. Johnston's, and think I can scarcely give you anything more interesting or useful, than some extracts from it, which Prof. Johnston has kindly permitted me to make.

He first speaks of the great bulk of the potatoe crop, which by the cost of its transport, prevents the farmer who has no near market, from growing it over a large extent of ground. It is therefore of much consequence if he can convert the potato into some more portable articles, which will at the same time meet with a ready sale. One of these articles is farina, or potato flour.

"Into this manufacture," says Prof. Johnston, "great improvements have recently been introduced, and the farina is converted into British *Tapioca*, into syrup, and other articles, which find a more or less ready market. The waste fibre of the potato, which formerly was considered fit only for manure, is now converted into a wholesome nourishment for cattle, and even the washings of the starch, where skill and economy preside over the process, are collected and employed as a manure. Mr. Binning Home mentions that these washings, when allowed to run into the potato drills, had given, near Stirling, a larger crop of potatoes than was yielded by other parts of the same field to which guano and farm-yard dung had been applied. The farina, or starch, has hitherto commanded a ready sale in the Liverpool market; and such was the success of a manufactory established in 1843, on the Bay of Wigton, that in 1844 several others were in process of erection, so that the outlet of the potatoe crop in that locality was greatly increased. The principal buyers of the potatoe starch have been the calico printers, and others engaged in the cotton manufactures."

Potato farina or flour has been laboring under a prejudice against its use, and the mixing of it with wheat flour practiced by some bakers, has been considered an adulteration.

"In Germany a method has lately been introduced of making flour from potatoes, which has not, I believe, been tried in this country, but which is recommended as giving a better, a more palatable, and a more abundant article of nourishment than the common process of preparing potatoe starch. This method consists in washing the potatoes, cutting them into slices, as we do turneps, steeping these slices for twenty-four hours in water containing one per cent of sulphuric acid, (oil of vitriol,) drawing off the acid water, washing them several times with pure water, drying thom in a stove or oven, and then grinding them in a common grain mill. The flour thus obtained is pure white, and the refuse siftings or bran seldom exceed five per cent of the weight of the dried potatoes. The sulphuric acid in this process extracts the coloring matter of the potatoe, with certain other substances which would give the flour an unpleasant taste. This flour will not make good bread if used alone—it requires to be mixed with from one-half to one-third of wheaten flour."

"In growing potatoes for the manufacture of starch, (farina,) an attention to various circumstances is necessary in order to secure the largest yield of this substance. The soil, the manure, the variety of potato, its state of ripeness, and the length of time during which it has been kept, affect the quantity of starch it is capable of yielding. Some unpublished experiments made by Mr. Fleming, of Barrochan, last year, and liberally communicated by him, are very interesting. The results are exhibited in the following table:

Relative proportions of Starch and Water contained in 100 *lbs. of different varieties of Potatoes manured with Dung, with Guano, and with half Dung and half Guano together.*

Varieties.	Manure Applied.	Starch.	Refuse.	Water.
		lbs.	lbs.	lbs.
Perth Reds, ...	guano alone,	15·3	14·6	69·9
... ...	half dung, half guano.	15·5	15·2	69·5
Rough Reds, ...	guano alone,	16·0	18·5	65·5
... ...	dung and guano,	17·1	18·1	64·8
White Dons, ...	guano alone,	9·0	14·5	76·5
... ...	dung and guano,	10·2	14·9	74·9
Connaught Cups, ...	dung alone,	14·5	15·6	70·0
... ...	dung and guano,	14·4	14·3	71·2
Buffs, ...	dung and guano,	14·8	14·0	71·2
Berwickshire Blues, ·	dung and guano,	14·3	15·6	71·0

REMARKS.—The potatoes were lifted before they were quite ripe. The starch was made from the whole potatoes, well washed but not scraped. The starch was dried before an open fire, and the refuse at 300° F. in an oven. I found it difficult to get all the parcels of starch to the same degree of dryness.—*W. Fleming.*

"There is a great difference, as the above shows, in the proportions of starch extracted from these different kinds of potato. The white dons, for example, yielded little more than half of what was obtained from the rough reds. On the whole, the red potatoes seem to be the best starch givers, and it appears to make little difference whether guano and dung be employed alone, or together in the proportions of half dung and half guano. The difference in the proportion of water between the white dons and the rough reds is very striking, amounting to about 2½ cwt. in the ton. Such facts as these are of importance both to the starch maker in buying his potatoes, and to the grower of potatoes who raises them for sale to the manufacturer.

A method has lately been recommended by Mr. Böggild, of Copenhagen, for making the potatoe more available and profitabe in feeding cattle than it has hitherto been. Potatoe starch is easily converted into grape sugar, and he proposes to take advantage of this, in order to bring the whole potato into a soluble state, to make it more easy of digestion, and thus to increase its feeding properties.

"He washes his potatoes well, steams them thoroughly, and then, *without allowing them to cool*, he cuts them in a cylinder furnished with revolving knives, or crushes them in a mill, and mixes them with a small quantity of water and 3 lbs. ground malt to every 100 lbs. of the raw potatoes. This mixture is kept in motion, and at a temperature of 140° to 180° F., for from one to five hours, when the thick gruel has acquired a sweet taste and is ready for use. Given in this state, the results of experimental trials are said to be—

1st. That it is a richer and better food for milk cows than twice the quantity of potatoes in the raw state.

2d. That it is excellent for fattening cattle and sheep, and for winter food. That it goes much farther than potatoes when merely steamed; and that it may be economically mixed up with cut hay and straw."

A letter from Copenhagen, dated April 29th, 1845, says, "This invention has been more and more appreciated and applied in my native country, (Norway,) and in Denmark, and the great advantages with which stall feeding may be introduced at considerable less expense than formerly, render it suited to general promulgation. The method has more and more gained adherents, and further comparative experiments made by scientific and experienced persons, have proved its superiority. Thus one of these experiments establishes that an increase of 1¼ lbs. of flesh is obtained from 25 lbs. of potatoes—that the feeding of horses with this mash is found to be applicable and cheap, and they all confirm that potatoes used in this manner as food amply afford double the nutritive powers compared to the food formerly used."

I have heard of no experiments on the above method in this country as yet, and therefore cannot say how much credence is to be given to these statements; the matter however, is certainly worthy of a trial. A common cider mill would crush the steamed potatoes with great ease, and there is nothing in any part of the process involving much expense. Indeed I think all the hints contained in the above extracts are worthy of attention from our intelligent farmers, especially those who are far inland, away from readily accessible markets. Very truly yours, JOHN PITKIN NORTON.

MR. MITCHELL'S LETTERS—No. XI.

Geneva, Switzerland, Sept. 8, 1845.

LUTHER TUCKER, ESQ.—Within a fortnight past, I have walked over half the distance from this to Paris. Some things seen by the way, may perhaps be jotted down with interest to your readers. Wine is the great crop, and vineyards stretch along by bits, and by hundreds of acres as far as the chain of the Juras, which separate the eastern districts of France from Switzerland, and which yield immense quantities of charcoal and timber, and in little basins of the hills oats and potatoes, with stinted crops of hemp and barley. The vines are tied to stakes forty inches in height, three to four feet apart each way—are kept closely trimmed, and in many vineyards, so late as the present month, the vine dressers were plucking off the young shoots. The ground is kept light, free from weeds, and generally without intermixture of other crop; though I have seen in a few instances sugar beets and hemp growing with the vines. A light soil is preferred, and of situations, one upon the slope of a hill facing the south, is most productive—not always in quantity, but in what is of more consequence—of a better quality of wine. Particular vineyards enjoy great reputations for producing a delicious wine, which they maintain for centuries, and fields immediately beside them, though of similar exposure, and possessing the same mineralogical character, are found to fail in producing the desired flavor. The famous Burgundy wines are grown along the line of my route. The vineyards principally lie upon the slope of a chain of hills, from 800 to 1000 feet in height; the soil is of a yellowish red loam, producing good crops of Indian corn, clover, and hemp. Old vines produce the best wine—young vines, the most. The method of making, in general terms, is to tread the grapes with heavy wooden shoes in troughs, until all are broken, when they are placed in a large vat with the must, where fermentation takes place; after which the liquor is removed to lesser vats, and changed from one to the other every two or three months until fit for the cask. The wine of the young vines, or of the poorer soils, (poorer in producing delicacy of flavor,) and the produce of a poor season make up the common drink of the country, or the *vin ordinaire;* which may be found in every little auberge by the way, and in nearly every house. Its price, when ordered at the humbler taverns, is about 10 sous, or 9 cents a bottle. It is rather better than poor cider and not so good as good beer. The *vin ordinaire* of the towns is of course much better. The best of the wines sell from seven to eight francs a bottle upon the spot, ($1.30,) but only when 8 or 10 years old. Barley was another considerable crop met with upon the plains of France, but was generally weak and unpromising in appearance. The oats very late, but in many parts a good crop. The smaller grasses I scarce saw at all; some crops of clover and of vetch were of only ordinary quality. Sugar beets no better than the average of ours at home. Beans and hemp good. Upon the plains at the foot of the Juras, I was surprised to see for the first time this side of the Atlantic, large fields of Indian corn, covering from 10 to 20 acres. It was late, wanting a full month or more of ripening, (3d Sept.,) and quite small. It was neither planted in hills or drills, but stood scattered over the ground some ten inches apart, and the culture, though it must have been very inconvenient, was thorough. The fields passed would have turned 30 to 40 bushels to the acre. The season has, however, been most unfavorable—a succession of cold and wet until within a fortnight past. The vintage will be late, and it is thought, very much poorer than usual. The mode of conducting agricultural operations, so far as witnessed along the line of route, was very inferior and unbusiness like. Land laid down to the grasses, left in an exceedingly rough state—hay-making lazily gone through with, and not unfrequently large quantities molded and ruined. I passed some twenty pieces of grain, which had been cut, and laid with the cradle, and then left until the kernels had sprouted from the dampness. The plowing was poorly done, and light crops the necessary consequence. I saw no ditching or draining—no subsoiling—no irrigation—which latter indeed would be difficult, since but one or two brooks were crossed from Paris to the mountains. There are no hedges or fences except in the immediate neighborhood of some of the larger towns, and cattle when pastured are attended by keepers. Pasturing in the fields is, however, not common, except upon some rich meadows which are subject to overflow, and which, with their wide extent of green, and scattered poplars, and immense herds of cattle, offered a very grateful contrast to the general monotony of the country. The appearance of the vineyards is by no means so rich as the stranger who has heard only of *La belle* France—a land teeming with oil, wine, and silk, might suppose. At a distance upon the hill slopes, they have much the appearance of a New England brush pasture; nearer by, they have an aspect peculiar to themselves, but unless when the grapes are turning—no more inviting than so many brambles, nor one half so beautiful as the broad, long, glossy green leaves, and feathery spindles, and silken ear-tops of our American corn-fields. The implements of husbandry are almost universally of the clumsy and unuseful construction; the plows entirely of wood excepting a point of steel upon the nose, of a huge size, and worked over the axle of a pair of wheels, as described in my Jersey letter of last June. The hand implements are even more awkward than the larger ones; shovels have handles four to five feet in length; hoes are very similar to the bog-hoes of our country; scythe snaths are formed of natural crooks of extreme clumsiness, and forks for hay are mostly of wood, tipped with rams' horns. Immediately under the Juras, and this side them, the plows and scythes are of better character; the former resembling much our own, and without wheels. The scythes are short and broad, of thin metal, and lightly hung upon a stick into which the tholes are framed. They cut easily and closely, as I took occasion to prove by actual trial, upon the banks of the Rhone. The working cattle are to the west, horses and mules; in the interior some oxen appear, and to the east, and in the mountains, oxen are used almost exclusively. The horses are not superior except in power of endurance, and the harnesses are most cumbersome and slovenly. The oxen draw, yoked together by a straight beam passing directly across the top of their heads and bound strongly around the horns and forehead. As a consequence, their heads can be moved only up and down, and then only by common agreement. When worked singly, as they often are, the collar and trace is used. The oxen, except upon the mountains, are of good size and finely built. The cows are generally small; few are seen along the post-roads of France, but in the valleys among the mountains, vast numbers are pastured, and great quantities of cheese are sent thence to the city markets. Its quality is vastly inferior to the English or American, and its price ranges from 7 to 14 cents per pound. Butter is worth in the Paris market from 25 to 40 cents a pound. For dressing various dishes, and for frying, a cheap oil is used instead of either lard or butter. Potatoes fried in olive oil is a very common dish of the country. A plain boiled potato was not set before me from the time I left Southampton, until I reached Geneva. I need not say, they are now a luxury.

Teasles were frequent along the whole route through France, growing wild, but I saw none cultivated. Plums have been seen in abundance. Apples are not common except in particular districts, and are there inferior. Almonds and walnuts are plenty. Wine and bread with a bit of cheese is the common food of the country workers. They are indolent in habit and dirty in person. The grain is mostly reapt, and a good American cradler would lay as much in a day, as a whole family of Burgundian workers. Men, women, and children are all in the field, and there seems to be little difference in the respective amounts of their labor. I have seen a girl of eighteen at the plow stilts, and a man of forty driving. What say your Hudson demoiselles to this?

Until again, yours truly, D. G. Mitchell.

Domestic Correspondence.

APPLICATION OF MANURE.

Editor of the Cultivator—It has been said that manure is the raw material of the farmer, from which he manufactures his agricultural products. Much, but not too much, has been said in modern days, upon the modes of increasing the raw material. Permit me to call the the attention of cultivators, more particularly to its application. A good manufacturer is careful not only in procuring stock, but more especially, in working up this stock to good advantage. With too many farmers it seems to be the aim to make and apply manure, not stopping to inquire how it can *best* be applied. Green and rotted, composted and clear, it is too often applied, indiscriminately to all kinds of soil, when and where convenience or custom may direct. There can be no question that long manure is best adapted to hoed crops, and well rotted compost for a top dressing. But the principle, to which I would particularly invite attention, is that given by the Creator to Adam, and legible in all nature's works, viz: that seed produces seed after its kind; in other words, that like produces like. Look upon the stately trees of the forest. How have they attained their great dimensions? Who has been their cultivator, and what the mode of their cultivation? He, who does all things well is their culturist, and their food the decayed leaves and branches that are annually deposited at their roots. Man has been slow in learning the simple principle from the Great Teacher. It is but a recent thing that the vine dressers of France have discovered that the prunings form the best manure for the vines. It has long been observed that hog manure is exceedingly well adapted for a crop of corn. Does not the fact that hogs are generally fatted upon corn, furnish the reason of its adaptation? An experiment of a good farmer in this vicinity, bears directly upon this principle. Cutting the tops of corn for fodder, he places the bottom stalks between the rows, and upon these stalks he turns back furrows; without further manuring or plowing, he plants his corn, and his crops are above the average of those in the neighborhood. A similar experiment with potatoes has proved that the tops well covered at the time of digging, will furnish sufficient manure to ensure an equally good crop the succeeding year. Onions it is well known succeed best when sowed on the same ground year after year. Is not the rationale found in the fact that the tops are always left on the ground. Rye, has been known to grow on the same land for a course of years, with undiminished yield, with no other manure than that furnished by the stubble plowed in. Chip manure is universally recommended for promoting the growth of young fruit trees. The wherefore is found in the simple principle we lay down, that like produces like. Nature has furnished all seeds with nutriment in themselves the best adapted for the future plant. Who can doubt but that the pulp of the apple was designed as food for the seed as well as to gratify man's appetite? The blade of wheat and the sprout of the potatoe, as they first shoot forth, feed solely upon the parent stock.

The principle we have thus briefly illustrated and endeavored to prove, has important practical inferences. If the principle is true, no top dressing can be better adapted for grass than the aftermath left to decay on the ground. The manure from stock fed on hay should also be applied to grass lands, while that derived from grain should be applied to farinaceous crops. It is not necessary to carry these inferences further. They will suggest themselves to all readers of reflection.

Lee, Sept. 15, 1845. Berkshire.

GUANO FOR ROSES AND GRAPE VINES.

L. Tucker, Esq.—Brooklyn is somewhat celebrated for its shade trees and grape vines, certainly with those who have lived here; and a man in looking up a place to rent, would almost as soon expect to find his house without a kitchen as his yard without one or two grape vines. There is no doubt it has often been the turning point in men deciding about taking a place. Nay, I may go farther, and say that most men would absolutely pay an additional fifty dollars rather than be without these adjuncts; and this feeling seems to be pretty generally appreciated, for a house is no sooner completed here, than down go the shade trees in front, and the little patch of a yard is embellished with—certainly the vines—and as many shrubs and flowers as can be crowded into it. But my purpose is not to describe this delightful city, (which New-York may well be jealous of,) but to give a bit of experience I have had with guano this year. I feel more like speaking of it now, as before me are a couple of heaping plates of the most delicious grapes, of the Isabella kind, I ever saw, which I think is the result of its application. I had read and heard a great deal of the wonderful power of guano upon plants, &c., and having something of a turn for experimenting as well as rural pursuits, and my field for operations being rather small, I concluded to buy a small quantity and try it upon my grape vines and house plants. I had learned about its dangerous effect unless judiciously applied; so I made a mixture of one part of guano to four of earth, a portion of which I applied to a rose bush in a pot, by digging it in about the roots; it had been doing very poorly, so much so that I thought it of small value, and had almost concluded to throw it away, believing it was merely a common garden variety, and utterly useless as a house plant. The effect upon it was truly wonderful; it commenced directly putting out new shoots, and in a short time was covered with blossoms of the most fragrant kind which remained a long time in the stem; it has since done well, and is now bearing three beautiful roses.

I have three grape vines, and being a little *scary* about using guano, I only applied it to one. The three, last year, bore very nearly alike in quantity and size of fruit, as also my neighbors' vines, each side of me. This year my *two* vines, and those of my neighbors have borne only moderately well—not as well as last year quite; but my third vine, about which I put the guano, has exceeded any thing I ever saw, both in quantity and quality, much of the fruit being as large as a fair sized walnut, with a deliciousness of flavor *positively delightful*. I have seen nothing in market or exposed in the streets of New-York for sale, that would begin with it; some of the clusters are tremendous, and I have this evening gathered from one shoot four bunches that would each cover, and well too, an ordinary tea plate. Now, whether this abundant yield is the result of my application it is impossible for me to tell, but sure am I, that my impressions of its probability are so strong, that one like experiment would make me a full believer in the efficacy of guano. A. T.

Brooklyn, L. I., October 10th, 1845.

LETTER FROM ALABAMA.

Luther Tucker, Esq.—It often happens that in this world of disappointment, our plans become frustrated. I have been brought to this reflection by the disappointment of the pleasure of a personal interview with you, as well as the pleasure of being present at the late Agricultural Fair of the State of New-York. I hope soon to receive through the columns of the different Agricultural papers, a full account of all that was done at Utica; but the best written account that can be given, I am apprised will fall far short of the reality. I had long desired to see the different states of our common union, and as far as I could, make myself acquainted with soil, climate, the products raised, the manner of cultivating the lands, &c., and on the 4th of June I set out for the purpose of travelling, having in view the above objects. I found on reaching Montgomery county, in this state, and examining the farms of several of my friends, that they have grown rich by the cultivation of the soil there. Large cotton farmers gave evidence of their wealth.

In passing up the Mississippi in the month of June, you see the extensive sugar plantations in a high state of cultivation. Indeed, as you pass up through the state of Louisiana, you are delighted with the show of comfort that is seen. I spent a month in the state of Illinois. Here I saw the finest lands of the United States. Indeed I have often understood that the best and richest lands of America were in the state of Illinois, and from what I saw I have no doubt of the truth of the assertion; and when the day comes that a set of such farmers as live in Western New-York, settle in Illinois, it must become the granary of a great part of the world.

Having spoken of the farmers of Western New-York, I must say that I was highly delighted at the appearance of farms as I passed on from Buffalo until I reached Albany. Indeed it appeared to me that every rock was made to tell us something, that every spring was turned to some account. Although the drouth had injured the crops to some extent, still such was the industry of the farmers in plowing up their fields and hauling out manure, that it was apparent they would be prepared to supply themselves with a fine crop of wheat and hay for the coming season.

The year 1845, throughout the states of Virginia, North Carolina, South Carolina, Georgia, and Alabama, will be long remembered for the severe drouth that has fallen on the country. The corn crop of this portion of Alabama, from what I can learn, has not suffered so much as the cotton crop. Indeed on my own farm, I make as much corn as I made in 1844, but will not make any over half the cotton of 1844. It is true, I did not plant as much cotton as I did that year, and should I be spared, I intend to plant less another year. My object is to make a large supply of provisions of every kind, and only plant such a crop of cotton as I can prepare in the best possible style. Indeed a large proportion of my crop of 1844, sold for over 10 cts. per lb., so that I think I will find my system in the end the most profitable. Indeed, I have made for the last two years, 16 per cent. on the capital invested in agriculture.

Alexander M'Donald.

Eufala, Barbour county, Ala., 25*th Sept.*, 1845.

VAN ANTWERP'S PATENT CHURN DASH.

This dash was invented and patented by Peter Van Antwerp, of Coeymans.

The theory of this dash is very simple; but still it cannot be fully observed by any description which I can give you; it requires a trial to test its efficacy. I shall endeavor, however, to give as correct a description as possible, and if I am right in my theory, please inform me; if not, explain the true position of this dash.

It is an established and well known fact, that in the common dash, there is a flat surface; and by the ascending and descending thereof, a vacuum is left, which produces a suction, thereby impeding the course of it.

By the construction of Van Antwerp's dash, this vacuum is destroyed—the suction removed—which leaves a free and unimpeded course to the dash, and requiring but half the labor.

1st. Is the handle. 2d. The knob or head of any size, (say from 1½ to 2½ inches in diameter,) with two rows of holes—six holes in each row—the rows being bored one inch apart. The lower row of holes are bored directly under the space left by the upper ones. 3d. The buckets or paddles, one-half an inch thick, one-half an inch wide at the tenon which enters the knob, and gradually widening to the outer extremities, to about 1½ to 2 inches.

The upper holes, (the dash standing in an erect position,) are bored at an angle of 45 degrees, downwards; the lower holes are bored at the same angle, upwards; so that when the paddles are placed, the outer extremities of both are on an elevation. The paddles are also on an elevation of 45 degrees, sideways; thereby leaving no flat surface for a vacuum or suction.

Coeymans, N. Y., 1845. A Subscriber.

CULTURE OF WHEAT IN CONNECTICUT, &c.

Luther Tucker, Esq.—If you think the following statement of matters and things, will be of any benefit to the Agricultural community, you will please insert them in the Cultivator: To encourage the farmers throughout New England to sow more *wheat*, I can state that there has been more or less of wheat sowed on my farm for forty-five years, and there has been but two or three years at the most, when there has not been a pretty fair crop. In 1836 or 7, when there was a great scarcity of wheat throughout all the States, there was here an entire failure. On about four acres, I did not receive my seed sown that year. Since then the crops have been very good. For 15 years that I have owned the farm, there has no insect of any kind, injured the crop at all, that I am aware of. This year's crop is superb, weighing 62 lbs. to the bushel, and very plump. I generally soak my seed in strong brine, made of common salt with salt petre, 10 or 12 hours, then mix with slacked lime or plaster paris. This season I have sown on 7 acres 10 bushels of seed, raised near Seneca Lake, New-York. I generally change my seed once in 3 or 4 years.

My rye is likewise very good. I have threshed 45 bushels of rye, 350 of oats, and from 28 shocks, 15 sheaves to the shock, of wheat 36 bushels, with Badger's one horse power threshing machine, and I must say that I think it is one of the best now in use for threshing, and I have seen several different kinds in Western New-York. This machine will thresh 200 bush. of oats or 100 of rye per day, with ease to the horse, and thresh it very clean.

I should like also to state that I own a great prolific sow, which is said to be of the *Townsend thin rind breed*, which has had 79 live pigs at 5 litters; 14 at the first—15 at the second—16 at the third—18 at the fourth, and 16 at the fifth—she has raised 58 of her family. Who can beat this? Claudius Allen.

Cheshire, Conn., Oct. 13, 1845.

RULES FOR PLOWING.

L. Tucker, Esq.—I perceive that at our late Fair, two sets of premiums on plowing were awarded—one for old hands, the other for young men under 18 years of age. While cordially approving of this arrangement, permit me with all humility to suggest that in a future no. of your excellent paper, you should lay down a rule or standard, what constitutes good plowing, as great diversity of opinion exists on this subject. We find one farmer prefers a broad furrow laid flat—another a furrow standing straight on edge, while others give the preference to a narrow furrow at a given angle. How then is a plowman to know what particular description of work is, in the eye of a strange judge, the best? Whereas, if, (prior to the competition,) particular dimensions were prescribed, there would be no risk of any favor or partiality for one kind of plowing rather than another, as a carpenter with his rule and straight edge, under the direction of the judge, could at once decide which competitor best followed out the particular mode of plowing laid down. And I hold that the workman who can come nearest to the dimensions prescribed could easily plow to the satisfaction of any farmer, let his taste on the subject be what it may.

I have attended plowing matches for many years, and though I observe better plows are annually coming out, I do not mark any decided improvement in the style of plowing,—which I am inclined to attribute to the fact that at no plowing matches have particular dimensions ever been prescribed. John McConnell.

Remarks.—We think it would be proper for Agricultural Societies to establish some general standard for good plowing. We find but a small proportion of all the plowing in the country, performed in what could be called a proper manner. One of the greatest and most common errors, is making too wide furrows. This error is more or less prejudicial according to the nature of the soil—the injury being greater as the soil is more compact and tenacious. If the land to be plowed is *sward*, the object is the subversion of the sod in such a manner as that the decomposition of the vegetable matter shall be rendered most valuable and available to succeeding crops, and at the same time leave the soil loose and permeable to the roots of growing plants. To consider in detail all the circumstances which promote decomposition, would require more space than we have at disposal; it may however be remarked that air, heat, and moisture, are essential requisites. But in the case under consideration, it is necessary in the first place, that the vegetable substances in the soil be placed in such a situation as to check life, else their growth will be promoted by the very principles which would otherwise produce decomposition. A complete subversion of the sod is therefore the first requisite, and this should be done in a manner most favorable to its decomposition and the benefit of the crop to be put on the land.

It is obvious that a narrow furrow, lightly laid over, would, more perfectly than a wide one, divide the soil and adapt it to the support of a crop. It is not many months, however, since we heard a farmer remark that he would not care if six or seven inches of a field he intended to plow, could all be completely turned over at once. Few would probably attempt to defend this proposition, and yet the practice of many is so much in accordance with it, they not only turn over as much at once as they possibly can, but in some cases they attempt to cover with the furrow slice that which is not even loosened by the plow.

On the relative advantages of flat and angular furrows, we are aware that much diversity of opinion prevails. For very loose and porous soils, flat furrows may be equally as good, if not better, than those laid at any angle; but excepting for such, we should decidedly prefer furrows laid in such a manner as would admit a space for air underneath.

As to the proper depth of plowing, good farmers also differ. Since the introduction of the subsoil-plow, however, we think the question more easily settled, as the loosening of the sub-stratum by that implement, at once secures all the advantages of deep tillage, while it allows a surface furrow so shallow as to be liable to none of the objections urged against deep plowing.

THE STRAWBERRY.

Mr. Editor—Having noticed one or two (to me) apparent discrepancies in accounts relating to strawberries, I would feel obliged if you or some of your correspondents would harmonize them. First, Mr. Brice J. Goldsborough, in the April No., 1848, of the Cultivator, says he sold eighty (80) gallons of berries from 1371 plants one year old, besides what was consumed in his family, and some given his friends. Mr. Hovey says, (I believe in the 4th vol. of his Magazine,) in allusion to a bed of his seedling, that the bed did not produce twenty quarts, whereas it was large enough to have produced *two bushels*, the bed containing upwards of five thousand plants. Mr. H. according to Mr. G.'s yield, should have expected *forty* bushels, and not *two*. As I wish to plant some, I should like to know which, if either of these statements, I may take for data to guide me, in about the quantity to plant for the production of about a certain quantity of fruit, all things else being equal.

Another discordant matter I would like explained, may be gathered from the following. Mr Longworth, in Hovey's Magazine for July, 1842, writes:—"When at Mr. Cushing's, at Watertown, I was surprised to learn that his Keene's seedling bore fruit in a compartment where there was no other variety near. The Keene's seedling imported by Mr. Buist and myself, is defective in the male organs. * * * * I examined Mr. Cushing's strawberry when in blossom, and found it perfect in the male organs."

Now I would ask, how comes it that one should be perfect and the other defective, when all, (if of the true kind,) must have originated from one parent plant, and all, ad infinitum, must have inherited its peculiarities, of male or female?

Again, Mr. Philetus Phillips, in a circular dated April 1844, says—"In order to possess large and abundant fruit, we must cultivate such as have distinct male and female plants of the same variety."

Here again, I would like to know where the distinct male or female plant of the same variety could come from, as all must have originated, &c., &c., as before stated.

While writing, allow me to call for a little more charity at the hands of your correspondent, S. W., who calls the laboring man of England "dull, leaden-eyed, stupid, obsequious," for we are not exactly so, even in old England. If such expressions grow common, we shall presently have some other of your correspondents stating something to the effect that they have seen barber's blocks on American bodies. J. F.

Rochester, Oct. 7, 1845.

TO DESTROY THE RED ANT.

L. Tucker, Esq.—I take the liberty of sending you a very simple remedy to prevent the ravages of the small red ant, which infests the storerooms and pantries, to the no small annoyance of many a good housewife.

Though rather late in the season to be beneficial to many of your readers, it will not lose its efficacy by keeping till next summer. I was much annoyed by the above named insect this summer, and had tried every remedy that I had ever heard of, but to no purpose. I finally tried chalk, and in this way: I make a thick mark about an inch wide around the article or vessel I wish protected from the ants, at any convenient distance from the bottom of the vessel, and I find they will not attempt to pass over the chalk. I watched their motions for some time. They crawled as busily as ever, up as far as the chalk, where they seem to get very much excited, but not *one* of them attempts to pass over. I have tried the above remedy for over a month without a single failure. C. C. G.

Mobile, Ala., Sept., 1845.

Cattle should not be out in cold weather.

NOTES OF TRAVEL IN THE SOUTHWEST—No. VIII.

BY SOLON ROBINSON.

Visit to Warren county—Vicksburgh—Hill-side cultivation—Orcharding—&c., &c.

Well, dear reader, are you rested? so am I, and so, if you please, we will go ahead again. During a rest of four days at Log Hall, the residence of Dr. Phillips, I have eaten more vegetables than during the four weeks that I have been on the road from St. Louis.

Leaving the examination and description of the Doctor's plantation till another day, let us mount our horses and take a ride over Warren county, and visit the city of the "Walnut Hills," the far-famed town of Vicksburgh. This county is one of several similar ones along the Mississippi river, and presents a most singular formation. It is called hilly, but I think the word side-hills would convey a more correct idea. It seems to me, from careful examination, to have been a deposit of alluvium two or three hundred feet deep. At the bottom, coarse gravel, then fine, then sand, and then a deposit some ten or twelve feet deep, of fine silex, lime and shells; now a bed of rich marly loam, above which is the fine alumina that was held longest in solution. After this deposit had lain long enough to form a stratum of limestone underneath, it was apparently disturbed by an earthquake, which left the surface in the most uneven condition of any tract of country I have ever seen. I saw many side-hills in cultivation lying at an angle of 45 degrees, and singular as it may appear, although there is not a level farm in the county, until the present season, side-hill plows have been almost unknown. Those of Barnaby & Mooer's, that I have seen, are entirely too large. If they will make a light, one-horse size and send them here, they will find a market. The few now in use are the tumbling shares.

If any of my readers are anxious to know how such steep hill sides can be cultivated, they must come and see—I cannot tell them. There are many farms that do not contain a spot of level land large enough to build a house upon; but the fertility of the soil is so great and so inexhaustible while it remains unwashed away, that it has tempted men to overcome difficulties that never would have been encountered upon poorer land. Although the cultivated hill-sides are much steeper and more numerous than those of Capt. Eggleston, yet I believe the same system could be adopted to save this excellent soil from utter destruction. Though it does not appear to wash away quite so easily as the lighter lands up north, yet I find places here gone past all redemption, and worthless for every purpose except Bermuda-grass pastures, over which nothing could range but sheep and goats. In fact the whole country looks more suitable for a sheep range than for anything else, and in no part of the United States could wool be raised to better advantage. Of the feed for them I shall speak hereafter, and as to the deterioration of the wool on account of the *climate*, I have only one word to say, and that is "*fudge!*" If any one chooses to contend for the contrary, I will bring witnesses.

We left the Doctor's place for our ride on the 25th of February, which was so hot that it was very uncomfortable. On account of the high water in the Chittaloosa, the Indian name for the "Big Black," and a much better one, to my notion, we had to go a round about way. We passed during the day, in our twenty miles ride to Vicksburgh, some very good plantations, and as is almost universal in the state, all well fenced, and but very few good dwellings. The cause, I have heretofore spoken of—difficulty of getting lumber—mill streams are among the things wanted.

Vicksburgh is built on the face of a bluff that rises from the river 200 or 300 feet high, and which is broken into sundry other bluffs and ravines, and these are multiplied by lesser ones wherever the water can get a chance to gully out the soft friable soil. The town contains a very quiet and peaceable set of order-loving inhabitants notwithstanding the bad name that they got a few years ago, by a very summary way of ridding themselves of a pack of gamblers, robbers, and murderers. It is a place of considerable business, though not half as much as it was. The railroad from here to Jackson cuts off a good deal of trade. The town is situated at the bottom of a great bend of the river, and as there is no high land on the opposite side, fears have long been entertained that the ever changing stream might make a "cut off" across the narrow part of the bend, and thus leave the town "alone in its glory." Greater changes than this have taken place. "The Walnut Hills" settlement and fort, near which the present town is built, has an ancient and historical name. It was settled by the old French explorers.

About dark we left town with the intention of riding out to a friend's house, about four or five miles—Mississippi miles, and over Mississippi roads, and through, I can't tell how many, Mississippi gates—more than we were able to find by negro directions, in a dark night, till near midnight. Late as it was, we were met at the gate in southern style—a guest never thinking of entering the house without this little ceremony.

Before pushing ourselves off in the morning, we took a stroll over the farm, and the greatest curiosity witnessed was the possibility of raising a crop upon such a wonderful uneven surface. Among the small curiosities was an alder tree eight inches in diameter, and a sumach fifteen inches in diameter. And I was assured that this latter was used abundantly on the Yazoo river for rail timber. It grows tall and straight. I visited upon this place a heavy cane-brake. If it is thought by any of my readers that cane only grows upon low, wet land, let them think more correctly. All these hill-sides were originally covered with an immense growth of cane, now fast disappearing from the country. It grows so thick upon the ground as to make it difficult to penetrate. I was unable to learn the period of time it requires to come to maturity, or whether there is any certain time. A few years ago, I think in 1830, nearly all the cane in this part of the country seeded. It then dies. The seed bears a slight resemblance to oats, and is about as nutritive. All kinds of stock are fond of young cane, and it is by the constant cropping that it is so rapidly destroyed. Its want of durability renders it of little value, though it is often used to make drying scaffolds for cotton. But all scaffolds except folding ones, are nothing but a make-shift.

The next place that I shall take notice of, is that of R. Y. Rogers, five miles from Vicksburgh, and from whom we met a most hearty welcome, and enjoyed a pleasant night visit. Mr. Rogers is one of the best farmers in the state—that is, upon a small scale, and that he does not raise a pound of cotton, affects not the truth of the assertion. For reduced by shipwrecks and other misfortunes from an abundant competency, to one pair of hands, he did not hesitate to use them. I venture to say that with his two or three negroes, and market-cart, which carries every thing he raises to Vicksburgh market, he makes more clear cash than some planters do with 200 or 300 negroes. It will be recollected that 20 to 30 bushels of corn per acre is about the average yield here; but Mr. Rogers has succeeded in raising 90 bushels per acre on his steep side-hills. He however turns his attention chiefly to marketable vegetables, and having but little competition, he reaps the benefit. I saw tomatoes in his garden to-day, Feb. 27, a foot high.

Within a short time past, Mr. Rogers has established a milk-selling business in town, and reduced the price from 40 to 25 cents per gallon. He assured me that it used to be sold for *two dollars* per gallon. After a most pleasant visit with this very intelligent gentleman and his lovely wife, he accompanied us as far as Col. Hebron's, where we met Dr. Bryant and several other gentlemen, and partook of one of the most sumptuous dinners that I have yet seen on my journey. And when we take into account the long distance between the house and kitchen, which Dr. Phillips and myself computed at twenty rods, it appears a still greater wonder how such a dinner could have been gotten upon the table in one day. This wide separation of the house and kitchen, is only an extreme of a very extraordinary fashion. If a similar fashion prevailed in Yankee land, we should hear of sundry enactments to "encourage the building of railroads" between the two points. I will just mention that among the standing dishes at Col. H.'s dinner, was one of his *three year old* hams.

Col. H. is earnestly engaged in a system of culture that I should like to see more universally prevalent here, where it can be followed with such pleasure and profit, and for which the lands of Warren county seem so well adapted. I allude to orcharding. Col. Hebron, Dr. Phillips, and several others, are making extensive efforts to supply the New-Orleans market, particularly with peaches. In a small way, this has already been done at a most enormous profit. Raising fruit and cotton will work well together; for the great hurry with the cotton crop is in picking time, which is long after the fruit season has passed. Many planters will not plant fruit trees only for their own use; in fact many of them not even that, so that the few who do engage largely in the business will be in no danger of over supplying the demand, and may be assured of ready sales at great profits. Peaches in this vicinity ripen the last of May and through June, July, and August. What is to hinder supplying all the up-river towns with early peaches? As soon as sufficient quantities can be produced to make it an object, arrangements can be made to put the fruit in Cincinnati market in five days from the picking. Of course all nearer towns would be supplied, and this too, several weeks earlier than the orchards in the immediate vicinity would do. Not only peaches can be produced in the greatest abundance at such an early day, but various other kinds of fruit. I have not the least doubt but that more money can be cleared with forty acres of orcharding and four hands, than with ten times the quantity of land and labor devoted to cotton. Besides the immense profits arising from the sale of green fruit, a vast amount may be realized from drying it. Every plantation has plenty of hands, old and young, that could be devoted to this business, which are now worth little or nothing for any other purpose at this season of the year. I do not ask farmers to abandon their other crops for fruit, but that they make it an auxiliary. And I would like to suggest to Mississippi wives that if they will put up a few tons of their surplus fruits in the form of such rich and most beautiful preserves as I have eaten at several of their tables, they could be sure of a ready market in New-Orleans at 25 cents a pound at least. A nice little sum of extra "pin money" might thus be accumulated every year, independent of the cotton bales. Will Mississippians consent to make money at this business of raising fruit? If they do not, and that right soon too, I will take it upon myself to recommend some of the experienced fruit growers of the North to go down and do it for them. They will have no fear of ill health upon your Warren county hill-sides, and will soon show you how the thing is done. As for "glutting the market," it may do for your children to talk about that—the present generation will not live to see it. The market can never be glutted nor the culture rendered entirely unprofitable, till the price is reduced to ten cents a barrel, and then hogs can be fattened on them. Col. Hebron told me he realized ten dollars a barrel for peaches last year.

I cannot urge this subject too strongly upon the attention of Warren county citizens—I cannot urge it too strongly upon the planters to become *farmers* in the true sense of the word. I cannot urge it too strongly upon Warren county farmers to become shepherds and orchardists if they wish to see their hill-sides descend unimpaired in fertility to their children, instead of descending to the Gulf of Mexico and the gulf of destruction! Orchards, Bermuda grass, and wool, can all grow upon the same soil, while soil and owners will continue to grow rich. At present, if the owners are enriched, the soil is not.

But there are a good many other things that southerners might learn economy in. And one of the first things to learn is, that out of their own staple we furnish them almost every manufactured article, for which they pay us for carrying the raw material from the gin and press we built for them, done up in our bagging and rope, and sewed with our twine and needles, drawn upon our waggons by our horses in our harness, over roads made with our plows and hoes and spades, to our steamboats, and upon that to our ships; not forgetting to let our commission merchants have a good share of "skinnage;" and then after manufacturing, to return it in the same way to exchange for more of the raw material; by all which means we constantly keep a raw spot in your feelings; but it is not yet sufficiently "galled" to teach you to become *home manufacturers*—the only healing salve that you will ever find to cure the festering sore of "such low prices for cotton that planters cannot live by it." Would you adopt a more prosperous course? Quit planting as you understand it, and become farmers as we understand it—raise upon your farm every thing as far as possible that you eat, drink, wear, and use, and never buy an article of cotton goods except it is of home manufacture—that is, manufactured in the country where the raw material grows—and never bale your cotton in anything but cotton baling made from cotton not worth sending to market in any other shape. Get up and keep up agricultural associations, and give premiums to that farmer who shall come the nearest to raising everything he consumes, and to him who will exhibit the greatest proportion of his negroes clothed in plantation manufacture throughout—and above all things else, read and support agricultural papers.

After leaving Col. Hebron's plantation we passed over another of those great ulcers upon the face of this rich country, a tract of worn out and "thrown out" land,—gullied to death—a frequent sight that the traveller cannot avoid. Then crossing the railroad at "Bovina," a name without a town, but a place that has lately been selected for a site for a cotton factory which I hope will cause the name long to be remembered—then after the fashion of this country, having ridden through sundry plantations, and more than sundry gates, and along a "bridle path" to a new ferry over the Chittaloosa, and through "the swamp," we reached Log Hall, by hard riding, just in time to save us the necessity of spending the night upon a road I should think might be impassible in the dark, and it is next thing to it in day light. But this is one of the ways to get to the worthy Doctor's, and the others are not much better. So we will not attempt to get away again till morning.

Again adieu, Solon Robinson.

VIRGINIA LANDS, &c.

Some time last spring, in writing a short communication for the Cultivator, I remarked that Virginia had the finest sheep walks in the world. Since this I am addressed privately on this subject, and to which I answer publicly.

It is the mountainous parts of Virginia which for this purpose I so highly recommend. I reside in Amherst county, 12 or 14 miles from the Blue Ridge, on the spurs of which I hold some 3000 acres of land, the greater portion of which is rich; and on which I have never failed to make my flock of sheep as fat as I desired. The soil of the greater portion of these mountains is of good quality, being in many places, one, two, and three feet deep. The hornblend and granite lands are rich; the slates are poor. The natural grasses are the greensward, (or Kentucky blue grass,) and white clover, which never fail to appear so soon as the timber is cleared off. The timber is principally chestnut, of superior quality for building houses and fences; and in many places, locust and other valuable timber. The mountains afford abundance of purest water. No part of the world can excel those mountains in the production of rye, oats, potatoes, hemp, flax, cabbage, beets, turneps, buckwheat, orchard grass, timothy, green-sward, and white clover.

A few days past, a tract of land lying near Amherst Court-house, sold on a credit, for $6 the acre, and another adjoining, at $5 the acre. Both those tracts lie well, the soil being tolerably good, and the subsoil very good.

Near my residence, and on an excellent turnpike road, a few days past, a tract of 353 acres sold on a credit for $4 the acre, a good portion being bottom lands, and the remainder good though hilly.

Our fathers were growers of tobacco, and we are yet too much at the old trade to be growers of wool, or manufacturers of any thing. And again, I say, "what a fortune a Yankee could make here;" just come and see.

The late drouth has curtailed our corn to perhaps less than one-half the usual crop; the oat crop is less than half, and tobacco about half. Corn is selling at 50 cents the bushel, wheat 75 cents, oats 30 cents. Beef from $2 to $4; cows and calves, $8 to $16; common sheep, 75 cents to $1.50. Ordinary wool, 30 to 35 cents. Hire of man per month, $5 to $8; women, about nothing.

This sheet, thus far written, has been lying on my table about ten days, during which time I have ascertained that my identifying the greensward as the Kentucky blue grass, is a mistake. I have both the green sward and Kentucky blue grass, but did not know till now what the latter was. The Kentucky blue grass grows in tufts very much the size and appearance of timothy, only that the blades are of a deep green color, and glossy appearance. It appears to be quite hardy, growing both late and early, and both in wet and dry weather.

The tobacco crop is now improving wonderfully, so that in the state perhaps three-fourths of the usual crop may be marketed.

I desire to say a few more words in reference to our mountain lands. Thousands of cattle are annually fatted on the mountains of Amherst, and thousands of acres on which they roam may be bought for one shilling, and perhaps less.

I suppose it is useless to tell either a Yankee or New-Yorker that the wool growing on a sheep is proportionate and adapted to the climate in which he is, and hence one advantage or profit in feeding sheep on mountains. Sheep are very healthy, and liable to but few diseases here. I have not noticed a sheep with rot for several years; and as to foot-rot I never heard of a case in the state. The greatest pest to our sheep is the worm in the nostril, which is often mistaken for the rot; and although irrelevant, I will take occasion to say, those worms may be dislodged and cast out, by laying the sheep on his back and pouring a spoonful of oil or melted lard in each nostril.

A flock of sheep can feed plentifully on our mountains till near Christmas, and through the winter they can be supported mostly by the growing rye; the snows being light and seldom lying more than two or three days.

Suppose a flock of 600 sheep.

Sheep account.	*Dr.*
To wages, one man 12 months,	$100.00
" " one boy "	25.00
" finding man and boy,	75.00
" feeding 600 sheep the winter,	300.00
	$500.00
	Cr.
By 150 old and young sheep sold,	$225.00
" 2000 lbs. wool sold, at 35 cents,	700.00
	$925.00
Annual profit on $500 cost,	$425.00

A man and boy can attend 1000 sheep, which is perhaps as many as should be together, even in a healthy region.

This estimate does not give a just profit, but let it for the present suffice. ZA. DRUMMOND.

Amherst Co., September 10th, 1845.

REMEDY FOR "THE HOOKS."

MR. EDITOR—The remedy you give for the hooks, in the September No., is cruel and unnecessary. Mr. Youatt, in his book on the horse, describes the *haw*, commonly called hooks, as a cartilage that wipes off the horse's eye, and keeps it clean. When the eye becomes inflamed, the Haw sometimes projects. The remedy which I have known successful in several cases, after a few days application, is to dissolve sixpence worth of white vitriol in a pint of rain water, and put a drop or two in the corner of the horse's eye, two or three times a day. I have been told by one who has seen the effects of cutting out the haw, that the horses in every case became blind, not long after. Some weeks since, our family horse had a bad cough, the consequence of taking cold; after having it about ten days, I gave Homœpathic remedies, twice a day, for a week, at the end of which time the horse was well, and has been ever since. CHARLES H. TOMLINSON.

Schenectady, Oct. 1st, 1845.

THE SCAB IN SHEEP AND ITS CURE.

MR. TUCKER—Until lately, I was under the impression that the flocks of this country were entirely free from this troublesome and infectious disease, but in some of the eastern agricultural papers, I perceive many complaints about it, and various cures suggested, which it would be wrong to let pass unnoticed. I am unable to say what causes the disease, but I do know that it has been for years, I believe I may say for centuries, a source of much trouble to the flock masters of Ireland, and that sheep coming off a journey, where they have been bought at some distant fair, have invariably shown symptoms of the disease, when the stationary flock has been entirely exempt from it. That it is infectious there is no question, and consequently every shepherd should be very careful to remove the infected sheep from the rest of the flock the moment he is discovered. In its incipient stage it is easily subdued, but if allowed to take root without applying a cure, it is very difficult to get rid of. There is no excuse for a shepherd who understands his business, allowing it to make any headway, because the symptoms are so evident, that they cannot pass unnoticed, except from palpable and unpardonable neglect, or from ignorance. On the infected part, the color of the wool becomes changed, and is easily noticed; if the disease breaks out on the neck or shoulders or along the back, which is almost always the case, the sheep is constantly throwing up its head and bending its back, as it were to ease itself by that position; if a blotch occurs on any part of the body where it can turn its head to, it takes the wool in its mouth and endeavors to pull it out. When any of these symptoms occur, the sheep is certainly more or less diseased, and should be immediately taken and examined. The shepherd should always have by him a strong decoction of tobacco, into which should be put good coarse Liverpool salt, in the proportion of 1¼ bushels to 40 gallons; the older this tobacco water is, as it is called, the better, so as it loses none of its strength. The shepherd should have a quart bottle, into which to put his tobacco-water, stopped with a cork, through which a quill is put, similar to those bottles from which bitters are served at coffee-houses. If the skin is not very thick and hard, and will yield to the finger and thumb when squeezed, all that is necessary is to divide the wool over the infected part, and from the bottle through the quill, to pour the tobacco-water, and rub it, or rather scratch it well in with the nail of the finger; if the skin is very thick and will not yield to the squeezing of the finger and thumb, you must take the small blade of your penknife, and puncture the skin, closely all over the infected part, to the depth of one-eighth of an inch, then put on your tobacco water, and rub it as before well in with the nail. One such dressing is generally sufficient, but it may be that a second light dressing may sometimes be required. There are ointments recommended by many, the principal ingredient of which is mercury, which should never be admitted to use by any good shepherd. First, if the sheep gets wet while under the influence of it, it is certain death to the animals; next, although such ointment will cure the disease, yet the remedy is as bad as the disease is itself, for it renders such portion of the fleece useless. It raises the scab from the skin and leaves it in the wool, and so disfigures it as to make it unsaleable; besides wherever the mercury touches the wool, it destroys its vitality, making it dry and brittle, and entirely useless to the manufacturer for any purpose; moreover the sheep once dressed with this ointment never regains its constitution, and is liable every spring after, to peel off its wool, from those parts that were touched with the mercury.

The tobacco juice kills the scab effectually, and does not raise it from the skin to disfigure the fleece. In its use in any weather there is no risk to the life or health of the animal, neither has it any bad effect on the wool, and although it stains the wool for the time being, yet when the fleece is washed, such stain then entirely disappears. It should be borne in mind by all owners of sheep, that there is no better *preventive* for scab, than to wash the sheep after being shorn, with strong brine and a brush. Yours very truly, **Grazier.**

PLAN OF A STABLE AND CARRIAGE HOUSE.

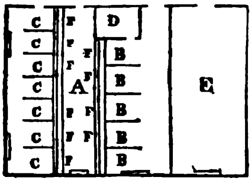

Fig. 94.

The size may be made to suit the wants of the builder. I would dispense with racks, as they add to the expense and are unnecessary. If the mangers be placed about two feet from the partition, the space will be sufficient to hold all the hay needed at one time.

From the feed-room, oats, corn, cut hay, &c. may be placed in the manger, through openings in the partition, without entering the stable or passing from stall to stall. The second story is the hay loft from which the hay may be dropped at once into the manger, through openings. In the December number of the Cultivator, 1844, p. 385, are some interesting suggestions relative to the size of stalls, materials, mangers, &c., suitable for this plan.

References.—A, Feed-room. B, C, Stalls. D, Harness and saddle room. E, Carriage-house. F, openings from the feed room. Mangers indicated by parallel lines; windows by double marks. **Yarrow.**

CONSTRUCTION OF ICE HOUSES.

"What is the most approved plan of constructing an ice-house where the springs at certain seasons of the year are within four feet of the surface of the ground."—*Cultivator of Sept.*, 1845, *p.* 291.

Our plan for building an ice-house in any situation, is this:—Lay a good stone foundation in lime mortar, as you would for any other building, raising it about 18 inches above the surface of the earth—10 feet by 15 feet is large enough for the necessities of almost any private family. Have your studs 12 inches broad by 2 inches thick—rafters the same—10 feet from the sills to the plates. Run a partition around the corner, that the entrance may be about 5 feet square—doors 2½ feet wide. Fill the space within the foundation wall 3 or 4 inches above the top of the sill, with tan bark, so that it shall be at least two feet deep after being well stamped down. Then board the inside tight with well seasoned boards, roof and sides;) nail on a board all round the outside and fill the space with tan bark well jammed in, and so proceed till you arrive at the ridge, making every space and vacancy tight with the bark. Afterwards shingle and clapboard as you like. Thatch, well put on, would probably be best, but shingles are well enough. The partition should be double, and a space of 6 inches filled with tan-bark. The doors should be so constructed as to be filled four inches thick with bark. The whole, except the doors and casings, may be of rough hemlock lumber. This is much after the West India manner of building ice-houses, where ice is kept many months, always entirely above ground, with the thermometer averaging about 80 degrees Fahrenheit.

Great care should be taken in packing in, which should be well covered with straw, with water sprinkled over it, and stowed away during the coldest weather. The doors of the ice-house should be left open during some of the coldest days and nights immediately succeeding—then close all tight—

"Till tyrant heat, dispreading through the sky,
With rapid sway, his burning influence darts
On man and beast, and herb and tepid stream,"

when you will find yourself possessed of the luxury laid by in store. **Farmer C.**

Manlius, Sept. 22*d*, 1845.

BOG CUTTER.—(Fig. 95.)

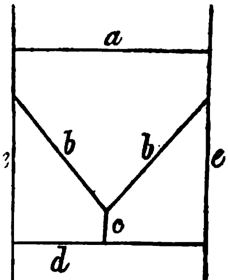

Fig. 95.

Mr. Editor—In your September number, under hints for the season, page 286, I saw an inquiry made respecting a tool for cutting bogs or tussocks. We have formerly used the bog hoe as there mentioned, but this is both *slow* and *hard*. Two years ago I invented a tool, (which I believe I have mentioned before, calling it an ox-jointer,) that does the work well. It is a triangular knife.

The hypothenuse is four feet, made of a bar of iron, 3 inches wide, five-eighths of an inch thick, laid with good steel, with the face side down, that it may keep close to the ground; the ends of the two legs are framed into a short sled, on the under side, and shod over these ends with an old worn cart tire; (the sled is four feet wide and the same in length.) An upright knife is screwed into the angular point of the knife and the hinder beam of the sled, which steadies the knife, and divides the tussocks, making them lighter to remove. I hitch a chain to the end of each runner of the sled, put on one pair of oxen, and ride on the sled. In this way I cut 3 or 4 acres per day. Where the tussocks, knobs, or bunches, are thick, the knife must be ground quite sharp. It will not work among stones. **Samuel Camp.**

Explanaion.—*a.* Forward beam of steel—*b. b.* The two wings of the knife—*c.* Upright knife—*d.* Hind beam of sled.

Plainville, Ct., Oct. 11*th*, 1845.

REMARKABLE CALF.

Mr. Tucker—I paid a visit a few days since to the Messrs. Root, who are among the best of our Genesee farmers, to see a calf in their possession, which has become quite a subject of remark in this region, and is, in truth, a very remarkable animal. He is now over two months old. He weighed 101 lbs., at birth; at the end of four weeks, 203 lbs.; and in two months time, 312 lbs. These weighings were attended by suitable witnesses. His color, is a deep red, and so perfectly formed is he, that the best judges say they find not the slightest room for censure. He is very matured in appearance, though by no means dwarfishly disposed, as you have already learned from the foregoing. The insertion of his tail, especially resembles very much that of a fat ox. He is four feet in girth. He was sired by a two year old of the Durham and Devonshire breeds, seven-eights of the former, and measuring seven feet. His mother is a cross of the same breeds. They are both unusually fine animals. The calf is visited quite frequently from all parts, ladies and gentlemen. We think him quite a wonder here. Some go so far as to say that no such animal can be found in the country. At any rate we should be glad of any information you may be pleased to give us on the subject. **An Amateur**

York, Livingston Co.

APPLES FOR HOGS.

Mr. Editor—I have kept my hogs on apples every fall and winter for ten years past. I put rather more meal with my apples than people usually do when they boil potatoes; but not enough to keep the hogs alive if they had no apples. My hogs usually look better in the spring than any of my neighbor's, that are fed on potatoes. In fact, they thrive and keep fat all winter. I lay my apples in a large bin in my hog-pen, let them freeze when the weather becomes very cold, then cover them up with rye straw and keep them frozen all winter. When I want to use them, I put them on my stove in a large pot or kettle, let them be on just long enough to take the frost out of them and feed them to the hogs warm. Some people only turn warm water on them and thus take out the frost. Boiling or thawing them takes the sourness or acid all out of them, and renders them more palatable and nourishing. I give each hog one-third of a pailfull of apples at a time, three times a day. If I fed them on potatoes, I should give them nearly as many in quantity, as I do apples; therefore, I think a bushel of apples is worth nearly as much for hogs as a bushel of potatoes. It is my opinion that our farmers better set out more orchards rather than cut down what they now have. The old orchards are fast going to decay in this vicinity, and the rising generation will want for apples unless there is more trees set out soon.

Horace Goodhue.

P. S. I feed good mellow sour and some sweet apples to my hogs in the fall, both to my fat hogs and shoats, every day, and think that they both make them grow and help towards fatting them.

Westminster, Vt., Oct. 9, 1845.

CEMENT WATER PIPES.

Luthur Tucker, Esq.—I was interested in a communication on Cement for aqueducts, in the third vol. Genesee Farmer, p. 55. I have waited with some anxiety to learn the result of the experiment. At first sight, the communication refered to, appears plain and practicable; yet, to one entirely unacquainted with the business, it is blind, entirely blind on the most difficult point.

I have seen nothing since that date, to throw any new light on the subject, excepting your last August No., recommending common lime.

What should be the thickness of cement around the bore sufficient to bear a pressure of six feet of water?

For a double pumpstock, where the water enters, rises, passing down the opposite side and off to another outlet, what is the method of building, uniting with the aqueduct, and securing from the frost? Also, what is water lime worth at Albany?

I should be happy to receive an answer to the above questions, by some experienced man, either by letter, or through your valuable paper.

Also, by one that knows the expense and utility of cloth for covering buildings; what kind of cloth would be cheapest; what paints are used to make it water proof?

Wm. F. Guernsey.

Rochester, Vt., Oct. 14, 1845.

We shall be glad to receive an answer to the above, from some of our subscribers.—**Eds.**

THE PUMPKIN.

Ed. Cultivator—In the various excellent tables of analysis which have of late years been supplied to farmers by Liebig, Johnston, Dana, and others, I have been unable to find any analysis whatever of the common pumpkin. Although many thousand bushels must annually be produced in this country, and greatly assist the farmer in fattening and keeping his stock, even Mr. Ellsworth in his last report as Commissioner of the Patent Office, makes no mention of them. As I regularly sow and grow this fruit with my corn, and as it is a general practice with farmers in my neighborhood, I am desirous of ascertaining, if possible, the following facts, and you would much oblige me, and others, by answering the succeeding questions, if the subject has been investigated:

1. What are the component parts of the pumpkin, as compared with potatoes, ruta baga, and carrots, and what is their comparative *chemical* value as food?

2. Do they, or do they not, to any notable extent, deteriorate the land; and do they injure the crop of corn with which they are growing when planted in every two or three alternate hills?

3. In what part does the fattening quality lie; in the seeds *alone*, which are obviously oily, or in the whole fruit; and do they, like peas, add chiefly to the flesh; or like corn to the fat, or do they do both?

4. Is there any peculiar process whereby the crop may be greatly increased, independent of the ordinary manuring and working of the corn, of which, of course, they partake.

As I find this a very valuable and cheap crop for *starting* the fattening of my pork and beef, I should wish if possible, to increase the crop, should I find that it does not lessen the still more valuable crop of corn.

Very obediently yours, **Charles Fox.**

Grosse Ile, Michigan, Oct. 3, 1845.

We are unable to point to any analysis of the pumpkin, but practical farmers know that it is very valuable for feeding stock. It will fatten animals rapidly, and for producing rich milk, we scarcely know any thing equal to it. We have never considered them an exhausting crop to the land; like other broad leaved plants they are thought to draw their nourishment largely from the atmosphere—but we have sometimes had the ground in cornfields so completely covered with the vines, that they hindered the corn from filling and ripening by obstructing the heat of the sun.—[**Ed.**

IMPORTATION OF SPANISH MERINO SHEEP.

Weybridge, Vt., Oct. 20, 1845.

Luthur Tucker, Esq.—You may well recollect that D. Jay Browne, Esq., of the city of N. Y., last spring gave us several interesting and valuable letters through the American Agriculturist, relating to "Sheep Husbandry in Spain." Having had the pleasure of meeting Mr. Browne last summer, I learned that an earlier importation of Spanish Merinos than we have had any account of, was introduced by William Foster, a merchant of Boston.

I therefore wrote to Mr. Foster, and also to Mr. Sales, the Spanish Professor in Harvard College, whom I also learned was knowing to the fact. From the latter gentleman, I have received the following reply:

S. W. Jewett.

LETTER FROM PROF. SALES.

Cambridge, Oct. 9, 1845.

Mr. S. W. Jewett—I received your esteemed favor of the 25th of last month in due time, and should have answered it sooner if I could have had the good fortune of seeing my good and old friend, the Hon. Wm. Foster, of Boston, who was the real, and I believe the first importer of merino sheep in this country. Not having been able to find him, having since called at his residence in said city, I left a line requesting him to give me the information you desire, and the following is an extract of what he has this day written to me:

"You will remember that when we came from Spain together, in April 1793, in the ship Bald Eagle, Captain John Atkins, you and I were at that age in which young folks love to take risks, and to do extraordinary things; accordingly, I smuggled from Cadiz, three merino sheep, and a valuable painting of "Rebecca at the well," by Murillo, prohibited under severe penalties. The painting I found a few years ago, (being reminded by you of its existence) in Col. Sargeant's garret. I gave it to the Boston Athenæum, where it is much valued. The three sheep I bought of a drover from the Sierra Morena, on the condition that he should bring them down with the drove, for the shambles, and deliver them outside the city gates, to a certain fisherman, who smuggled them on board our ship. They arrived safe after a long passage and much sickness, and I gave them, as you well remember, to Andrew Craigie, Esq., of Cambridge. Soon after I went to France, where I passed fifteen years of the Revolution. On my return, meeting one day Mr. Craigie at a sale of merinos, where he paid $1000 a piece for them, I asked him what became of the Ram and two Ewes. He answered, very innocently, that he ate them, they being of no value, as we had no manufacturers. That, in fact, he did remember that they were merinos. So ended my speculation."

The foregoing information is, as you see, *authentic* as to your request, and if I can at any time be of further service to you, command me freely.

I remain, dear sir, very respectfully,
Your obedient servant, **F. Sales.**"

HEATED AIR.

"A hot air apparatus," says the late John Loudon, "complete in all its parts, is a desideratum yet to be reached." It is believed that the "Hot Air Furnace," brought into notice, and recently much improved by the subscriber, will give entire satisfaction to those who desire *summer all the year*. Unlike the coal furnace, it does not decompose the air, or in any way unfit it for respiration, but a large volume is constantly introduced at a low temperature. The increasing demand for this apparatus, where it is most known, is the best testimonial in its favor; but numerous references to individuals and public institutions can be given if desired. Post-paid letters of inquiry, or orders, promptly answered if addressed to WILLIAM R. SMITH.

Macedon, Wayne county, N. Y.

BOTANICAL TOUR.—No. IV.

MR TUCKER—On the 5th of May, I left Dandridge in Tennessee, and went thirty miles up the French Broad river, to Mr. Huff's, on the road to the Warm Springs in North Carolina. The next day about noon, arrived at Painted Rock, six miles east of the springs. The road from Dandridge up the French Broad, presents some grand and beautiful scenery; sometimes the river pursues a quiet crooked course along broad and rich valleys, and again it is pent up between mountains, and then it rushes with a foaming current as if anxious to obtain quiet in the plains below. To me the scene was inspiring. I felt new life—new vigor—besides my eyes were gladdened with the sight of some rare and beautiful flowers, among which were the *Dielytra formosa* (D. C.) and *Cladrastis lutea*, (Raf.) or yellow wood. The former grew in the greatest profusion in tufts on the precipitous sides of the rocks, overhanging the river, near the rock. Of the yellow wood, I saw but one tree, but was informed that others grew in the vicinity of the Warm Springs. It has large white flowers, resembling the common locust. I was told that a decoction of its roots was of great use in cases of consumption. After dinner I sallied out among the mountains in the vicinity of Painted Rock, on the road towards Greenville, and collected *Viola hastata* (Mx.) *Convallaria majalis*, (lilly of the valley,) which occurs frequently on the Allegany mountains, and is also a native of the mountainous districts of Europe. *Convallaria umbellata* was also common. *Andromeda recurva* (nobis,) a small shrub, in flower, was of frequent occurrence, but its locality appears to be quite limited, as I did not afterwards find it. *Buckleya distichifolia*, (Torr.) a new genus, occurs frequently on the banks of a small stream a few rods above the rock. It grows also along the road in the vicinity of the Warm Springs. It is a shrub, four to six feet high, with pinnate leaves, and has recently been introduced into the Botanical Garden of Harvard University by Prof. Gray, one of the well known authors of the Flora of North America, which, when completed, will undoubtedly be our very best Botanical work.

Painted Rock is on the line between the States of Tennessee and North Carolina, and derives its name from several large spots of red paint at the height of about twenty feet on the perpendicular rock of a part of the mountain facing the river. These spots are said to have been made by the Indians, but for what purpose I could not ascertain. These rocks are composed of a silicious Graywacke, reposing on a bed of granular limestone, which last occurs at the Warm Springs. A large portion of East Tennessee, or that part of the State lying east of the Cumberland mountains, is composed of strata of Graywacke slate, limestone, and sandstone, alternating with each other, by which it will be seen that it contains the elements of a good soil. It is also rich in iron ore, which is manufactured to considerable extent. The traveller cannot fail to be struck with the luxuriant appearance of the vegetation; even the sides and table lands of the mountain are generally composed of a rich vegetable mould, covered with the pea vine, (vicia,) mixed with native grasses and white clover, affording an excellent range for stock. The white clover seems to delight in these mountain situations, and is already widely diffused. No country can be better calculated for the raising of sheep. The mountains would afford an excellent summer range, while the sheltered situations of the valleys would yield ample protection during the winter. The growth of timber is magnificent, composed in part of numerous species of oak, (*Quercus*,) chestnut, (*Castanea vesca*,) hard maple, (*Acer sacharinum*, sour gum, (*Nyssa sylvetica*,) sweet gum, (*Liquidamber*,) American holly, (*Ilex opaca*,) several species of pine, the white elm, (*Ulmus Americana*,) white beech, (*Fagus sylvestris*,) several species of magnolia, poplar or white wood, (*Liriodendron tulipifera*,) and along the banks of the smaller streams the hemlock spruce, (*Abies canadensis*.) Nearly all of these attain a large size. Possessed of a fine healthy climate, a good soil, with numerous rivers and mountain streams affording water power for manufactories, East Tennessee has all the elements to support a dense and happy population.

S. B. BUCKLEY.

West Dresden, Yates Co. N. Y., Oct. 15, 1845.

INQUIRIES.

A gentleman sends us the following queries in relation to the culture of broom corn. Answers to them would undoubtedly benefit the public generally, and we shall feel obliged to any one who will furnish the information wanted:

"1st. What kind of soil is best adapted to its growth?

"2d. In the present condition of the markets, is the culture profitable?

"3d. What amount in value can be produced on an acre, and what the probable nett profits?

"4th. Is it probable that the increased production will be likely to overstock the market and render the culture less profitable than it is now?

"5th. Is there any difficulty in procuring the seed necessary to plant fifty or an hundred acres, and at what price per bushel?"

FISH PONDS.—B. H. (New Lisbon.) We have often seen ponds of the size you mention, with plenty of fish in them. As to the kinds of fish suitable we are hardly able to give an opinion. If the water is clear and cold, which from its coming from a spring we should naturally infer, trout would probably do well. Pickerel might do well enough for *themselves*, but they have so much of the shark nature that they will exterminate all other species, in small ponds. As to gold fish, we think it likely they could be obtained of Mr. R. L. PELL, of Pelham, Ulster county.

RUSSIAN BEE-HIVE.—The third No. of Johnson's Farmer's Encyclopædia contains a drawing and description of a "Russian Bee-Hive." I wish to enquire, if any of your subscribers have made trial of it, and will report thereof through your journal. No mechanic in this vicinity will undertake to make one from the description there given, and I should like to know if one can be obtained elsewhere. E. G. R.

SOILING—*Greenwood*, (Princeton, N. J.) The first crop usually used for soiling, before red clover will do to cut, is rye, which should be sown on good warm land early in the fall.

CURING PORK.—In running over the October No. of the Cultivator, I notice, what I presume, to most of your readers, is a rather new method of preserving pork. You request, if others have practiced the same method, to give information of the results. I have for the last four years practiced the same method with the slight difference of letting it remain unpacked until the animal heat is all exhausted; then pack it with Turk's Island or rock salt, and pour on the brine boiling hot. I likewise heat my pickle for my hams the same way. I think it a decided improvement—it makes pork and hams very tender and of excellent flavor, and keeps them sweet the year round. It is almost universally practiced in my neighborhood with the best results.

PROSPER ELITHARP.

Bridport, Vt., October 10, 1845.

EXPERIMENTS WITH GUANO.

Mr. L. Tucker—Having tried numerous experiments with guano and stable manure, I send you the results. If you think it is worth a place in your truly valuable Cultivator, it is at your pleasure.

1. Four rows of potatoes planted in March—a small quantity of guano strewed in the rows with the potatoes. Four rows planted at the same time, abundantly manured with stable dung. In three rows were more potatoes than in the four manured with guano: the rows manured with guano were easily distinguished by the deep green foliage.

2. Rows of Lima beans manured with guano, about one gill to each hill. The beans sown did not germinate. I believe the guano killed them. I transplanted some in the hills, but I did not observe any difference between the produce of them and the two rows richly manured with stable dung. The foliage of the former was of a deeper green than the latter.

3. Two rows of maize, richly manured with stable dung; two rows with guano, well mixed with the soil; one row with charcoal. The two rows manured with guano were more productive than the other three.

I have tried different experiments with maize and guano. In some I used from half to a gill in each hill, but it proved a failure. The guano should be broken fine, and strewed over the ground as thick as grass seed—after that well mixed with the soil.

4. Two pieces of ground of equal size, the one part manured with guano, the other part with stable dung. They were sown with Ruta Baga Turneps. The part manured with guano proved the best crop.

5. A north border planted with Broccoli. One part manured with guano, the other with stable dung. No difference.

In the summer of 1844, at this place there was a piece of green clover plowed in, and in the autumn it was manured with guano and sown to grass. This autumn it has a good appearance; there is also among it a great crop of ambrosia elatior, ripening off a fine sample of seed. I have been told that this weed will not injure the crop of grass! It reminds me of old Tusser's advice:

> "Slack never thy weeding, for dearth nor for cheap,
> The corn shall reward it, ere ever he reap,
> And 'specially where he do trust for to seed,
> Let that be well used, the better to spead."

R. Parnell,
Gardener to D. F. Manice, Esq.

Oatland, *Hempstead*, *Oct*. 23*d*, 1845.

THE PEAR.

Mr. Tucker—I send you some pears, raised from grafts handed to me by an old countryman. As I first introduced it into notice, it is called in Oswego, "Worden's Meadow," (not Bleeker's Meadow.) The tree is every way right; bears young, grows vigorously, and bears large crops of fair fruit every year, and is worthy of extensive cultivation. Fruit from medium to large, form variable with a knobby and uneven surface; flesh very fine grained, melting, juicy, sweet, musky, and high flavored; yellow at maturity. This pear must be picked and matured in the house, which takes place from the 10th to the 15th of Sept., as the seasons vary. It is not so good this season, owing to the drouth.

I discover that the cultivation of the pear is much neglected by our farmers, the objection being that it takes so long to come into bearing; but this is not the case; and for the benefit of farmers, I will mention those that bear young and are good:

Summer Fruit.—Bloodgood, Julienne, Petit-Muscat, William's Bonchretien or Bartlett.

Autumn Fruit.—Andrews, Cushing, Seckel, Frederic of Wurtemburg, Napoleon, Flemish Beauty, Brown Beurre, Vergalieu. Schuyler Worden.

Oswego, *Sept*. 13*th*, 1845.

WHARF RATS—INQUIRY.

Mr. L. Tucker—Since the building of the Chenango Canal, a new kind of rat has been introduced among us, called the wharf rat. They seem to possess more cunning in eluding the efforts of rat-catchers, than any species of rat hitherto known among us; and such is their astonishing increase and industry of mischief, that it has become a subject of serious inquiry among farmers living within 8 or 10 miles of the canal, how to get rid of them. I have searched your Cultivator for information, and have seen nothing upon the subject. Will you give us any information which you may have got through any of your various correspondents, and if you have none, you will oblige a numerous class of subscribers by asking for information through your paper.

Binghamton, *Oct*. 10, 1845. G. E. J.

NEW-YORK STATE AG. SOCIETY.

The monthly meeting of the Executive Committee of the N. Y. S. Ag. Society, was held at the Society's Hall, Albany, on the 9th Oct.—the President, B. P. Johnson, Esq. in the chair.

The Recording Secretary presented a package of Russian pamphlets, received for the Society, from Charles Cramer, Esq. of St. Petersburgh, consisting of,

1. Zembnilsky, on the Localities of Diamonds in Russia—2. Historical account of the celebrated Sanic Diamond, by the same author—3. On the use of Granite in St. Petersburgh, by the same—4. Mineralogical System of Mohs, by the same—5. Kutorga's Description of Petrifactions found near Sympheropol—6. Brykoff, on the Locality of Gryphotes in the government of Orloff—7. Obodoffsky's translation of Buckland's Petrified Sago plants, of the island of Portland—8. Sturm's translation of Fuch's Theory—9. Machin's Chemical analysis of Platina from the Ural mountains—10. Analysis of an Aeseolite fallen in the government of Smorcusk, 1818—11. and 12. Wonders of Nature in North America, Parts 1, and 2, by Charles Cramer.

A copy of the "American Shepherd," was received from the author, L. A. Morrell, Esq.

The thanks of the Society were voted to Messrs. Cramer and Morrell for these donations, which were ordered to be placed in the Society's Library.

A plan and view of the show grounds of the late exhibitions at Utica, were presented, drawn by J. J. Thomas, and views of Floral Hall, and the temples of Ceres, Pomona and Flora, drawn by Dr. Thompson, which were ordered to be engraved for the Transactions.

A resolution was passed directing the publication of Mr. Quincy's Address in pamphlet, as soon as it should be received from the author.

Resolved, That the Treasurer purchase a model of the celebrated Broughton Prize Heifer, for the Society's rooms.

After auditing various accounts and the transaction of other business, the Executive Committee adjourned to the 2d Thursday of November, at 10 o'clock, A. M.

PREMIUMS.—All premiums, whether cash, medals or diplomas, will be paid on application, to Luther Tucker, Rec. Sec'y, No. 20, Market-st., Albany.

Important trial and decision.—The United States Circuit Court, now in session in this city, Judge Nelson presiding, has been engaged for the last three days in the trial of a very important patent case. Benjamin H. Wood, executor of Jethro Wood, sued —— Antony for an infringement upon the patent which Jethro Wood had taken out for "Wood's Plow," an invention of his own. This article is in general use throughout the United States, and scientific writers have said that it has been a more beneficial improvement than any other of the present century, except the steam engine. We understand that the rights of the patentee had been so generally infringed upon as to render his invention almost useless to him, so far as pecuniary benefit was concerned. The jury after a patient hearing of the evidence, and the addresses of the able counsel engaged, returned a *verdict for the plaintiff*. The effect of this verdict is to establish the patent of Wood to this useful invention, and thus put an end to the infringement upon his rights. Counsel for the plaintiff, W. H. Seward, Samuel Stevens and Z. A. Leland, esq'rs; for the defendant, Daniel Wright, esq.—*Albany Ev. Journal*.

MR. COLMAN'S EUROPEAN AG. TOUR—Part IV.

Although some might be disposed to argue as an objection to this, as well as to former portions of this work, that it is not sufficiently confined to the details of agriculture, we must be allowed to say that we have been deeply interested in its perusal, and we doubt not this would be the response of much the larger portion of its readers. The state of our columns when this part of the work was received, precludes our giving a very extended notice of its contents. It is divided into sixteen general chapters, the first of which consist of General Considerations; the others as follows:

Agriculture as a Commercial Pursuit: Markets—Cattle Markets; Falkirk Tryst; The Ballinasloe Fair; The Galway Fair; Smithfield, London; Grain Markets; Grain Markets out of London; The Corn Exchange in Mark-Lane, London; Corn Duties; Mode of Adjusting Labor and Wages; The Dead Markets; Vegetable and Fruit Markets; Market Gardens; Covent Garden Markets; General Markets.

Mr. Colman thinks—"The English farmers have great advantages in their markets and exchanges; and in this matter, to a certain extent, we ought to follow them." * * * "Our farmers sell as they can to agents or purchasers travelling through the country, and buy as they can, and where, by chance, after taking, in many cases, long and expensive journeys, they may find the stock which they need. A wool fair or market is not within my knowledge held in the country, nor a corn or grain market." * * * "These evils might be remedied and a change affected to the great advantage of buyers and sellers, by the adoption of the system of weekly or periodical markets, which prevail throughout England and Scotland. Here are wool fairs, for the sale of wool, of which samples are exhibited; and corn and grain markets, where wheat, barley, oats, rye, beans, and peas, samples of which are exhibited and sold; and markets for the sale of fat cattle, and markets for the sale of lean cattle, and markets for the sale of horses, and markets for the sale of sheep, and markets for the sale of cheese and butter; these markets sometimes uniting several objects, or otherwise limited to some single object."

The immense number of people and animals which are collected at these fairs is astonishing. At the Falkirk Tryst, in Scotland, for instance, Mr. C. says:—"It was estimated, when I was there, that the number of cattle then on the ground exceeded fifty thousand head, and of sheep seventy thousand; and the banker informed me that the money employed in the negotiations would exceed £300,000, or one million and a half of dollars."

Character of Live Stock.—Mr. Colman thinks "there is no agricultural improvement in England so great and striking as that which has been affected in their live stock." "I refer," he continues, "particularly to its size, aptitude to fatten, early maturity, symmetry, and beauty. Of the milking and dairy properties of their stock, I shall speak hereafter. A person has only to go into Smithfield Market to remark the perfection to which the art of breeding has been carried, and the distinctness of the lines by which the different breeds are separated from each other. Three great points seem to have been gained. The first is, great size and weight have been attained; the second is, the tendency to fatten, and to keep in fat condition has been greatly cultivated; the third is, that the animal arrives early at maturity. All these are most important points; the last certainly not least; for if an animal can be brought to the same size, without doubling the expense, at eighteen months old, that he could formerly be made to reach not sooner than at three years of age, the quick returns, so essential in commercial transactions, are secured, and the expenses are lessened the profits are greatly increased. Nothing strikes one with more surprise than to see what, in the improvement of stock, intelligence, skill, and perseverance can effect."

The dressed weight of the cattle in the Smithfield Market, at from two to three years old, is stated to be from 656 to 800 pounds, the four quarters. The average dressed weight of sheep is given at 90 pounds. In regard to the quality of the meat, Mr Colman says:—"The fatness of the beef and mutton is remarkable. I have seen single beasts in the United States as fat as any I have seen here; but these are comparatively rare exceptions; and here the general character of the beasts and sheep is, in this respect, most striking." He thinks, however, that our meats have a sweetness and flavor not possessed by those of England, which he attributes to the greater age of our animals, (they not being usually killed until five to seven years old,) and the superior excellence of our Indian corn as a fattening food.

Mr. Colman remarks that *mutton* is the prevailing and favorite dish on all English tables. We add, that it would undoubtedly be so in this country, if there was plenty of the same kind that is used there. "It is," says Mr. C., "a remarkable fact that mutton is the prevalent dish at the public schools and colleges. At the Blue Coat School in London, for example, it is the sole meat for the eight hundred boys, four or five days out of seven. The same is the case, I am told, at Eton; and this not, as I had supposed, from its comparative cheapness, but from experience, and the opinion of medical men, that it is the most wholesome diet, and least likely to interfere with intellectual application and health. The South Down and Leicester sheep are generally preferred, though the small Welsh mutton, for its exquisite flavor, is most esteemed; and the beef and mutton, and lamb, is every where most striking. Indeed, in the English market, lean meat is hardly to be seen."

Kinds of Bread.—In regard to the project of introducing Indian corn into Great Britain, which some seem to have entertained, Mr. Colman thinks it impracticable. The idea of feeding the poor on it is in his opinion out of the question. "They will not eat it. If the rich were to adopt it as a luxury, their example or estimation of it might have its usual effects; but to commend it to the exclusive use of the poorer classes as a kind of cheap bread, acknowledged inferior, though it were as sweet as the ancient manna, would be met with that pride of resentment, which anything short of absolute starvation would scarcely be able to overcome." The advantages in a commercial view which would accrue to this country from the admission of Indian corn into Great Britain, Mr. Colman thinks would not be great, as "there is reason to believe if its admission were free, the supplies of this article from the shores of the Mediterranean would nearly preclude the competition of the United States."

English Apples and other Fruit.—American apples are acknowledged superior to any brought into the English markets. The English apples are said to be inferior except for cooking purposes. "The superiority of our Newtown pippin," says Mr. C., "is every where admitted and proclaimed. Of other of our fine apples—such as the Golden russet, the Baldwin, the Blue pearmain, and many others—I have seen none, though it is not to be confidently inferred from that circumstance that none are imported. Large quantities of apples are sent from the United States to England and sold to advantage." Pears are considerably cultivated, but Mr. Colman thinks he has seen none equal to the Seckel and the Bartlett produced in this country. Filberts are cultivated in some parts of England for the market. A gravelly soil is chosen for them, "where they are raised on small bushes or trees, with one stem, and suffered to grow not more than five or six feet high. They grow together on the same ground with hops, and pear or apple-trees; and the proportionate number of each to an acre, is stated at 800 hills of hops, 200 filberts, and 40 apple or pear-trees. The hops are said to last twelve years, the filberts thirty, and after that the apples and pears require the whole ground."

Potatoes.—Mr. Colman considers the potatoes grown in England of superior quality, though he thinks them inferior to those grown in Nova Scotia. He complains that he did not find a potatoe in Ireland that he could eat, they being always only partly cooked—the Irish preferring to have them "with the bone in the middle." He was told that the advantage of this was that the potatoes were longer in digestion, and hunger did not return so quick. He found this, however, to be the mode of cooking, not only among the poor, but among rich and higher classes in Ireland. In the south of England Mr. C. states that land is rented at 20 pounds, or a hundred dollars an acre per annum for the production of potatoes for the London markets. The greatest pains are taken to obtain them early. "The mode of sprouting them," he says, "is similar to that adopted by the spirited cultivators at West Cambridge, near Boston, where the setts are started under a bed of fresh horse dung, on the sunny and protected side of a hill."

Grapes.—Mr. C. quotes from a practical gardener, some directions for the management of vines as follows: "With regard to the best way to manage the vine when fruiting, I invariably stop the shoot *one* eye above the bunch; and it is the practice of the best gardeners in England. I generally leave one shoot not stopped without fruit, and to fruit next season, and cut the shoots out that have borne fruit this year. On the shoot-spur system, every shoot is stopped an eye above the bunch, except the top one, and then it must be managed like the rest; all the lateral shoots *must be stopped one eye* above another, until they cease growing, as the more leaves you get, the fruit will swell larger."

Market Gardens.—The extent of ground required for supplying London and the other large English markets with vegetables, is enormous. In reference to London, Mr. Colman remarks that—"Fifty years ago, it was calculated there were two thousand acres cultivated by the spade, and eight thousand by spade and plow conjointly. The extent of cultivation must, of course, be at present much greater." * * * "The account given of the product, in a single case, is quite worthy of remark, it being the statement of a market garden. Radishes, £10; cauliflower, £60; cabbages, £30; celery, first crop, £50; second crop, £40; endive, £30; making a total of £220, or 1,100 dollars for the gross produce of an acre in twelve months!!"

THE CROPS, &c.

Kentucky.—Extract of a letter to the editor of the Cultivator, dated Frankfort, Sept. 17:—"After some weeks travel through this state, I can safely say that the corn crop of Kentucky is considered to be as good as any they have ever grown heretofore; consequently the number and quality of the stock fattened will equal those of any previous year. You will not be surprised to learn that I had no idea of the prices already offering for hogs, when I tell you the farmers themselves had no such expectations a few weeks since. Hogs are anxiously sought after by the pork packers and their agents, and $3 per 100 lbs. *gross*, (that is weighed up alive,) freely offered, the hogs to be weighed and paid for at the fattening pen when fat, and driven at the risk and expense of the purchaser to the place of packing. Many contracts are now making on these terms, and many farmers refuse contracting, preferring to risk the market when they are fat. From what I know of this business, when a little excitement exists so early in the season, I should not be at all surprised before the season ends that $4 gross will yet be given for some lots of hogs in Kentucky. Pork will certainly be *double* the price, or nearly so, that it was last year to the packer. The best graziers say, they never recollect so many cattle to be fattened in Kentucky as preparations are now making for fattening, and many think they will get $4 per 100 lbs. nett, sinking the offal, but the majority seem to think that the numbers fattened will tend to keep the price at, or below, $3.50 per 100 lbs, It seems too, to be generally admitted that the best beef cannot be packed, with the expectation of profit, for the British market, if it comes at over $3 per 100 lbs. nett to the packer. The hemp crop is extraordinary, far exceeding in quantity and quality the crop of last year. I have gone into several fields where they were cutting, and measured the average height of the stalks, and they exceeded 13 feet in length; the crop is now cut and safe in stack, although the wetness of the last few weeks caused the farmers much additional trouble. The tobacco crop is generally admitted to be very fine in quality, and in quantity to be over the average; what I have seen of it fully bears out this remark; but I have not as yet been through the Green River country, which is the great tobacco region of Kentucky, but I have seen men from there who appear very much satisfied with their prospects. This staple is just beginning to be cut now."

Crops in Essex County, N. Y.—M. C. **Butler**, of Moriah, writes that the wheat and oat crop of this section was good—corn two-thirds of a crop—potatoes half to two-thirds of a crop—hay less than for some years before.

Western Reserve, Ohio.—Extract of a letter from from Mr. **Almon Thayer**, dated Aurora, Oct. 11:—"The past season has been very dry with us. The hay crop is entirely cut off. As northern Ohio is better adapted to grazing than cultivation, grain is but little grown. Hay is the crop depended on for wintering stock, and a failure of this crop has compelled the farmers of the north to drive their cattle to the southern part of the state to be wintered on corn and corn fodder. The stock is all susceptible of being driven south except calves, which are too feeble to endure a journey of 100 or 150 miles. The farmers in this section are unacquainted with feeding any thing but hay. I would inquire if calves can be successfully wintered on chopped straw and corn-and-cob meal. Corn can be purchased at the south and shipped into this section by canal, at reasonable prices. There is a small quantity of straw and old hay in the hands of most of the farmers, that might be fed to calves, chopped fine, if they would winter well on this kind of feed."

Note.—In answer to the above inquiry, we would say, calves can be wintered on corn-and-cob meal, mixed with cut straw, though we should prefer giving some potatoes or turneps with the meal and straw, or instead the roots, some shorts or bran.—**Ed.**

RENSSELAER INSTITUTE.

This Institution was founded by the late Hon. **Stephen Van Rensselaer**, in 1824, for the purpose, as expressed in his own language, of "showing the application of science to the common purposes of life," and of qualifying "teachers for instructing the sons and daughters of mechanics in the application of experimental chemistry, philosophy, and natural history, to agriculture, domestic economy, the arts, and manufactures."

Patriotic design of the benevolent founder has been faithfully executed, and the anticipations of its usefulness fully realized. It may be safely affirmed that no institution has rendered greater benefits to the country than this has done by the education of men who have devoted their efforts to the practical application of science.

We had the gratification of attending for one day, the late examination of the students of this Institution. The examination as it was called, was conducted in a manner to us novel. Instead of being carried on by question and answer, it constituted a series of brief, but interesting off-hand lectures by the pupils, on the sciences of Chemistry, Geology, Mineralogy, Animal and Vegetable Physiology, Botany and Meteorology. In all which, a thoroughness of knowledge was evinced that could not fail to convince every spectator of the excellence of the system of instruction here practiced.

The charge of the Institution at the present time is under Professor G. H. **Cook**, who was a graduate of the school while it was under the supervision of its first teacher, the late Professor Eaton. Besides other and ample evidences of Prof. **Cook**'s qualifications and abilities as a teacher, it is a high recommendation that he was selected by Prof. **Eaton** as his assistant, in which capacity he acted for several years to the entire approbation of all. We believe the reputation of the school is at present fully sustained; and with the advantages of late improvements in the erection of new buildings, new and improved apparatus for chemical and other scientific illustration, with the liberal endowment which it has received from the family of its revered founder and the intelligent and enterprising citizens of Troy, we cannot doubt that it will shortly become one of the most popular, as it is certainly one of the most useful Institutions in the country.

For particulars in regard to the course of instruction, we would refer to the advertisement to be found in this number.

FACTS AND OPINIONS,

Condensed from various Exchange Papers.

OATS.—P. FAY, of Southboro', Mass., says the New England Farmer, had the present season, a ten acre field of oats, yielding about 60 bushels per acre. It was well manured, and sowed at the rate of about 4 bushels per acre.

YELLOWS.—A writer in the Boston Cultivator, states several facts to show that the yellows in peach trees is caused by too free a tillage of the tree, and gives instances where a moderate or slow growth secured the trees from the attacks of this contagious malady. On the contrary, Downing in his work on Fruit Trees, is confident, from many observations, that the yellows is a constitutional disease caused by long continued neglected cultivation, and exhaustion by successive crops. Within our own limited observations, it has attacked trees of all kinds, thrifty and otherwise, and under all circumstances.

ERRORS.—New theories are constantly springing up from single or very limited observations. Among some of the latest are, that nails driven into trees, and holes bored through them, prevent blight and other diseases. A tree becomes diseased—it is accidentally nailed or bored—if not thus greatly injured, it recovers of itself—and a theory is immediately established and pertinaciously adhered to.

DEEP PLOWING.—An English writer, speaking of the prejudice against deep plowing, says, "it would puzzle a conjuror to tell why a farmer always digs his garden 20 inches (where he always gets good crops,) and plows for his field crops only 5 inches."

ASHES AS MANURE.—On the farm of Daniel Webster, according to J. Breck, of the New-England Farmer, on [part of?] a ten acre lot of very light land, 3000 bushels of English turneps were raised last season, with no other manure than leached ashes, at an expense of only seventy-three dollars.

CANKER WORM.—The Indiana Farmer and Gardener, gives a method of excluding this insect. A roll or bat of wool, evenly carded, is applied round the body of the tree and tied tightly with a twine round the middle of the roll. The wool rising on each side, the twine is buried and hid. The worms ascending, encounter the wool, but cannot push through and lay their eggs in it.

PUTNAM RUSSET APPLE.—Dr. Kirtland, in Elliott's Magazine, says that after fifteen years acquaintance with this apple, he does not hesitate to pronounce it the most valuable for extensive cultivation of all late keeping apples, in northern Ohio, where the Newtown Pippin does not flourish. He also states that Shippen's Russet, a different variety, has been widely disseminated under this name.

REVOLVING HORSE RAKE.—It is singular that scarcely an agricultural paper has a correct figure of this implement. A figure, which first appeared, we believe, in some of the Boston publications, and since borrowed or copied all over the country, appears to have been drawn by an artist, who had never seen it in operation. He accordingly represents it as running on *the points* of the teeth, like the old hand rake, a way in which it is perfectly impossible for it ever to work. Why cannot we see a true figure with the teeth *flat* on the ground? As it now is, it is no better than to picture a bull walking on his horns, or a boy sliding down hill on his nose.

THE LOCUST.—A farmer in Western New-York, who is losing a large number of fine locust trees by the borer, wishes to inquire of those in the eastern part, who may have had experience in the matter, whether cutting the injured trees down, at the surface of the ground, and suffering them to sprout up afresh, will not produce good young trees—which would be as likely to escape the borer as young trees set out—and of course with less trouble? A reply from those who may be acquainted with facts, would confer a particular favor.

STEEPING SEEDS.—The New England Farmer describes some experiments on soaking seeds, made this season by J. S. C. Green, of Waltham, Mass. A chemist prepared for him a composition of nitrate, sulphate, and muriate of ammonia, and nitrate of soda and potash. In a solution of these he steeped corn from 17 to 140 hours. When steeped 100 hours, the corn vegetated poorly, but when it remained 140 hours, it did not vegetate at all. Having tried the seed in pots, he determined on 80 hours as the proper time for steeping. He planted a number of strips of three rows each, through a large field of 15 acres, noting the rows on tallies. At the time the editor examined the field the corn was in tassel and the ears well set. The corn which had been soaked exhibited no advantage over the other; on the contrary, if there was any difference, the soaked was not as luxuriant as the unsoaked.

PLOWING MARSH LAND.—The mud being too soft and deep to bear oxen or horses, a rope 14 rods long was attached to the oxen at one end and to the plow at the other, thus enabling the oxen to walk on the hard ground adjoining. A plow was made on purpose, turning furrows 20 inches wide. It had to be drawn back at each furrow. In one part, the upland not admitting of the direct working of the oxen, the rope was made to pass round a wheel or pulley, so that the oxen moved at right angles to the direction of the plow. It was manured with compost and sown with timothy, and produced a fine crop.

PEACH-WORM REPELLED.—George C. Dobson, in the Southern Planter, gives a method of preserving peach and nectarine trees, which has succeeded without any failure. Early in autumn, as soon as the young tree attains its growth for the season, the earth is removed from the root, and half a pint of soft *tar* deposited, and rubbed on the body of the tree for six or eight inches above the surface. The earth is then replaced. This process is repeated early in summer each succeeding year, taking care that the trunk is thus kept coated. An ovipositor would make rather slow headway through a coat of stiff tar.

INFLUENCE OF THE MOON.—A correspondent of an exchange paper, states that a rail fence, laid "in the old of the moon," will sink into the ground from six to ten inches in a short time; but if laid at other times it would not sink; that shingles nailed on the roof of a house "in the new of the moon" soon throw out the nails; that a crop *sown* in the new of the moon, is more affected by that planet, than a crop which *grows* during all other stages of the moon's changes, through several months; and that sheep shear heavier "in the going up of the moon," than otherwise. He might have added that wood *drawn* at the new of the moon would afford twice as many cords as if drawn at other times.

SAVING URINE.—Mr. BRECK, of the New England Farmer, describing Mr. Webster's farm, at Marshfield, says:—"There is no cellar under the barns, but Mr. Webster has hit upon a method to save every drop of liquid manure, and in the best possible way. The planks composing the floors of the cattle's quarters, or byre, as the Scotch call it, are laid with an opening between them of about one-half inch, and so arranged as to be easily taken up. The idea is to place about two feet of loam or other earth, under the floor; this will absorb all the liquid part of the manure as it runs down though the openings, and in the spring will be converted into the finest manure, when it is to be removed and replaced by fresh mold." This is a mode we have seen practiced in many instances, and we think it a very good substitute for a cellar under the barn.

SEED CORN—from the tip kernels of the ear, produced in a distinct experiment, only half as much as kernels selected from the middle of the ear; seed from the buts of the ears yielded about fifteen-sixteenths of those from the middle.

STRAWBERRIES.—In Ohio and Kentucky, single plantations of strawberries often cover many acres. The past season, 235 *bushels* were offered for sale in Cincinnati in one day. The price there is usually three or four cents a quart.

SILK FACTORIES.—There are eight silk factories in Mansfield, Conn., the greatest silk manufacturing town in the country.

THE CULTIVATOR.

ALBANY, NOVEMBER, 1845.

☞ The present volume of the Cultivator will close with the next no. (December,) after which, agreeably to our invariable custom, the paper will be discontinued to all who have not ordered and paid for the next year. We give this notice now, lest it should escape the attention of some of our readers, when given in the December no. We shall send out our Prospectus for the vol. for 1846, with our next no., and shall be greatly obliged to such of our present subscribers as may find it convenient to interest themselves in procuring subscribers for the next year.

TO CORRESPONDENTS.

During the past month, communications have been received from C. C. G., C. H. Tomlinson, E. G. K., Alex. McDonald, D. G. Mitchell, A Subscriber, S. F. Christian, T. H. H., Charles Fox, J. F., Samuel Camp, S. B. Buckley, E. P., E. Smith, Claudius Allen, H. Goodhue, Wm. F. Guernsey, J. H. C., J. P. Norton, G. E. J., S. W. Jewett, R. Parnell.

POTATOE ROT.—We have several communications on this subject, the publication of which we are obliged to decline, as they appear to give but little new light in relation to the malady.

TRANSMUTATION.—We have received a communication signed "A FARMER *of* 45 *years' practice in Chenango county*," the principal object of which seems to be to ascertain what we would "acknowledge to be showing" that wheat changed to chess. We refer the writer to our last number, page 322, for a plan which we think perfectly fair, and if he will produce chess from wheat according to that plan, or any other which shall amount to positive proof, he shall receive the $50 premium to which he refers. We conceive it can be of no advantage to publish any more *suspicions* of transmutation—when the thing is *proved* the public ought to know it.

C. C. G., Mobile.—You can order the works you want, through your booksellers or merchants, from New-York. The prices are—Downing's Landscape Gardening, $3.50—Cottage Residences, $2.00.

J. A. W., Norfolk.—We know of no work on the subject to which you allude, worth purchasing.

A. H., Lee.—See communication in another part of this paper, for directions for building an Ice-house.

CRICKETS.—H. K. C. wishes to be informed of the best way to destroy house crickets. Who will tell him?

S. F. C., Lexington, Va.—Will reply to your inquiries through the Cultivator, as soon as time will permit.

ALBANY AGRICULTURAL WAREHOUSE.

It will be seen by a notice in the advertising department of this paper, that the editor of Cultivator, has entered into partnership with Mr. ELON COMSTOCK, for the purpose of establishing in this city a warehouse for the sale of Agricultural Implements, Field and Garden Seeds, &c. and in connection with it an agency for the purchase and sale of all the improved breeds of stock. The want of such an establishment, in this city, has long been felt, and a thorough conviction of its necessity and utility alone induced the editor of this paper to become interested in it. It will be conducted under the sole management of Mr. COMSTOCK, a gentleman, it is believed, every way qualified to manage it to public satisfaction. The establishment is but just opened; and consequently is as yet imperfectly filled, but it is the intention of the proprietors, to procure, as fast as circumstances will permit, every variety of machines, implements, and seeds required by farmers and gardeners, and to make the establishment at least equal to any similar one in the Union.

ACKNOWLEDGMENTS.

SAMPLES OF APPLES.—We have received from Mr. J. C. HASTINGS, Clinton, Oneida county, samples of the following varieties of apples: Detroit Red, (or Black Apple;) Lowell, or Orange; English Fall Pearmain; Rutledge. They are each good samples of their kind. The Rutledge is an apple of the first quality. It is just now (Oct. 4,) in a fit state for eating. The English Fall Pearmain is a good sized apple, of fine appearance, and good quality. The Detroit Red, (or Black,) is a very large showy fruit, of pleasant, but not very high flavor.

Mr. C. McCoun, of Albany county, has also sent us several samples of apples grown on his farm. Among them was a very large apple resembling Pennock's Red Winter, weighing upwards of a pound. There are several other kinds of fine appearance, such as Spitzenburgs, Wine Apple, Lady Apple, and some varieties the names of which we did not recognize.

SEEDLING PEACH.—Mr. DORR, of this city, has left us a specimen of a seedling peach, which appears to us deserving of propagation. It ripens about the first of October, at which season it is difficult to obtain a good, well-flavored peach. It is of good size, and of a quality equal to most of our *good* summer peaches. Mr. DORR has also several seedling *clings*, well deserving cultivation.

CATAWBA GRAPES.—This fine grape, which is so prolific and attains such perfection in the vicinity of Cincinnati, seldom acquires its full natural flavor here—owing probably to want of sufficient heat. We have just seen, however, in the garden of Dr. MARCH, of this city, some Catawbas of a quality equal to any we remember ever to have met with. They had though, it is proper to say, an advantage of aspect equivalent to several degrees of latitude.

SEEDLING PEAR.—Dr. MARCH has a seedling pear which he keeps well through the winter. He exhibited some of them at our weekly agricultural meetings in the latter part of April last, in fine perfection. It is a good pear and highly deserving propagation. Dr. M. will furnish a few scions for grafting.

Since writing the above we have received from Mr. ELISHA DORR, of this city, some excellent samples of Catawba grapes, grown in his garden on Lydius street. They do full justice to the high reputation of this famous variety.

We have also received from "A SUBSCRIBER" at Brooklyn, Long Island, some splendid bunches of Isabella grapes, in reference to the production of which see an article in this number under the head of "Guano for roses and grape vines." The samples sent are superior to any Isabella grapes we have ever before seen, the bunches being very heavy and the fruit of uncommon size and richness.

☞ We would acknowledge the reception of a barrel of beautiful apples from D. HILL, of Bridport, Vermont. There are several choice kinds—Spitzenburgs, Gilleflowers, Blue Pearmains, Stodards, York Russets, and Fall Pippins, all very large and fair. If such apples as these are produced in the "Green Mountain State," her citizens need not go elsewhere expecting to find better.

OLD CHEESE.—We have received from Messrs. S. & L. HURLBUT and Mr. NORRIS COE, of Winchester, Connecticut, a couple of cheeses (two years old) manufactured by Mr. Coe, whose dairy was described in our September number, (pages 283, 284.) On trial, they appear fully to sustain the reputation for excellence which Mr. C's cheese has acquired in New-York and the southern cities.

HONEY.—We acknowledge the receipt of a pot of superior honey, from Mr. NATHAN HOWARD of Stephentown. From one swarm of bees placed in his improved bee-house, Mr. H. took four boxes of six pounds each, or twenty-four pounds, in ten days. The article is of the very finest quality.

☞ For editorial notice of Mr. COLMAN's Tour, Part VI., and several other editorial articles, see pages, 341, 2 and 3.

MONTHLY NOTICES.

☞ In our notice of the late State Fair, we inadvertently omitted to refer to the attendance of many distinguished gentlemen from other states. Among them were Dr. Holmes, editor of the Maine Farmer; G. W. Elmendson, editor of the British American Cultivator; M. B. Bateham, editor of the Ohio Cultivator; F. R. Elliott, editor of the Western Reserve Horticultural Magazine; Thomas Affleck, Esq., former editor of the Farmer, at Cincinnati, and now of Mississippi; Mr. Atwood, and Mr. Metcalf, also of Miss.; E. W. Thompson, V. P. Home Dist. Ag. Society, Canada West; Joseph Hartman, delegate from last named society; Franklin Jacques, delegate from the Ag. Society of the Township of York, C. W.; John Torrance, Montreal; John G. Mallock, C. W.; W. N. Hobersham, Georgia; A. S. Cooke, Louisiana; Mr. Felder, of South Carolina; Mr. Haskins, of Maryland; Mr. Gilmour, Baltimore, Md.; Jas. Gowen, Esq., Mount Airy, Pa., who has with a public spirit greatly to be commended, attended the last three exhibitions of the Society, and acted as one of its Judges on improved cattle: J. T. Buckingham, editor of the Boston Courier; Edmund Burke, Commissioner of Patents; Mr. Ballard, of Washington, D. C.; Solon Robinson, of Indiana; Mr. Turner, of Illinois; Dr. Reed, of Washington, Pa.; Judge Smith, and Messrs. Blakesly, Atwood, and Nettleton, of Connecticut; Messrs. Wheeler, Stickney, and others, of Massachusetts; John W. Dana, Mr. Brown, of Ohio; Mr. W. C. Wright, of Vermont, and others.

Sales of Stock.—We lately noticed a couple of fine Durham calves, and some superior Merino sheep designed for the west. The calves, (*Don* and *Dolly*,) are a very promising pair, purchased of Mr. Prentice, of Mount Hope, and are designed for Messrs. George Wolfe and Thomas McGuire, of Keene, Coshocton county, Ohio. The sheep were obtained in part from the noted flock of Mr. J. N. Blakesly, of Watertown, Connecticut, and part from the no less noted flock of Mr. S. W. Jewett, of Weybridge, Vermont. They were designed for Philo Buckingham, of Putnam, Ohio. We trust all these animals will arrive safely at their several places of destination, where we are sure they cannot fail to be highly appreciated.

We learn also that Hon. Daniel Webster, "the Marshfield Farmer," has just purchased of Messrs. Corning & Sotham two heifers, a three-year-old and a two-year-old, of their justly esteemed Hereford herd. They are designed for Mr. W's farm in Massachusetts. We are also informed that Mr. Stetson, of the Astor House, New-York, has purchased a Hereford bull and heifer calf, and a cow from the same herd. For the prices which have been paid for these fine animals, we have no doubt the purchasers will be amply satisfied and recompensed in the real improvement of their stock.

More Heavy Fleeces.—Mr. C. Smith, of Newport, N. Y., writes us that he has lately visited the farm of R. V. R. Horton, of Hubbartton, Rutland county, Vt., and was highly pleased with Mr. H.'s flock of sheep called "Paular Merinos." He says—"they were short legged, large chested, and in all respects superior looking sheep." * * * "Mr. Horton's flock of 100 ewes, sheared 608 lbs. 13 oz. of well-washed wool. One buck, two years old, sheared 12¼ lbs., and others from 8 to 11¼ lbs. The wool is fine and excellent." Mr. Smith adds, that "Mr. Horton has labored long and faithfully to bring his sheep to the position they now hold, and for beauty of form, hardiness of constitution, and quantity of fine wool, they are not excelled by any in New-York or New-England."

Mr. Smith, as well as Mr. Horton, are strangers to us, but we give the above statements just as we give others, that is, wholly on the responsibility of the persons making them.

"Many a little makes a mickle"—So says the Scotch adage, and we have just been told a good example of its truth. A butter dealer in this city has been for two years in the habit of saving the *scrapings* of his tubs, and such small portions as unavoidably became damaged by dust, &c., in opening and examining the tubs. The small parcels thus collected he threw into a tub, and when a quantity had been collected, he clarified it by putting it in hot water where the salt settled to the bottom, and the oil was skimmed off the top. In this way he collected enough to answer his purpose for burning as a substitute for lamp oil. It formerly cost him $20 a year for oil and candles for burning; but he has saved butter, such as was formerly wasted, to answer instead—thus making a saving of $40 in two years!

Egyptian, or Emir Barley.—In our October no. we gave a short notice of a grain which was spoken of in the last report of the commissioner of Patents, under this name, and mentioned also that our correspondent W. B. of Lawrens district, S. C. was desirous of obtaining some for sowing.

Mr. John D. Spinner, of Herkimer, has sent us a sample of bald or naked barley, which may be the kind alluded to by Mr. Ellsworth and W. B. At any rate, it is a handsome grain, and weighs, as Mr. Spinner states, sixty pounds to the bushel, and is also said to be very productive. Mr. S. states that in 1844, he sowed four quarts and it yielded four bushels. He says "if it is the kind of grain inquired for, it can be had at a much less price than W. B. offers."

Since writing the above, we have received a letter from Henry Brewer, of Enfield, N. Y., in which he states that he procured some of the "skinless" barley, (supposed to be the "Emir or wheat" barley,) last spring. He sowed half a bushel of it on 72 rods of ground, and the produce was 16 bushels, weighing 58 lbs. per bushel. It was also much injured by drouth and grass-hoppers. He can furnish a few barrels of it delivered at Ithaca. It can be sent by boats on the canal to New-York or Buffalo. He thinks it a valuable kind of grain. It makes, he says, good flour, which is preferred for cakes to buck-wheat.

Prof. Johnston's Agricultural Catechism.—A friend at Rochester informs us that this valuable little work has been adopted as a text book in the public schools of that city, on the recommendation of the Board of Education. "I think it," says the letter of our friend, "a most invaluable work, and if it could be introduced into all the schools in the land, its benefits would be incalculable.

☞ Mr. Hiram Mills will act as Agent for the next vol. of the Cultivator in Lewis county, and we shall be greatly obliged for any assistance our friends may be able to render him in extending the circulation of our paper in that county.

The next State Fair.—Mr. S. Whalen, of Saratoga county, "desires to suggest, through the Cultivator, Saratoga Springs as the place for holding the next State Fair. All things considered, it is a most desirable location. Independent of the numerous health giving fountains, Saratoga abounds with hotels which at the season of the fair are nearly empty. When these are filled, there are almost an untold number of private boarding houses, which with the hotels cannot fail to accomodate the 30,000 or 40,000 that congregate on such occasions." Albany, Troy, Auburn, and Buffalo, have also been named.

Address oe Hon. Z. Pratt before the Greene county Ag. Society. We have received a copy of this address, accompanied by a copy of a resolution of the society submitting the paper for publication in the Cultivator. In the great press of matter on hand we are unable to comply with the resolution, which under other circumstances we should be happy to do. The address is marked generally with the sound judgment and practical sense of the author, who in this instance has labored to impress on his fellow-citizens the great advantages which flow from a development of the natural resources of the country. He says—"We have resources and advantages possessed by no other nation; and a people better fitted than any other, to develop those resources and improve those advantages."

Of the means of promoting improvement in agriculture, Mr. Pratt highly commends the formation of agricultural societies, and the interchange of intelligence through the medium of agricultural periodicals. He says—"The formation of this, and other like associations, and the variety, and standard worth of our many periodicals which are devoted to Agriculture and the mechanic arts, show the spirit of our people. The benefit which the country receives on account of the free interchange of thought, and general diffusion of intelligence through these channels, is incalculable. An intelligent and well informed gentleman from the south once asserted that through the influence of the Albany Cultivator alone, the wealth of that part of the country had been increased more than two millions of dollars."

Teacher's Advocate.—This is a new paper devoted to the cause of education. Its publication was commenced on the first of September last. It appears to be conducted with much energy and talent, and we doubt not is destined to be an important organ in the advancement of the grand cause in which it has engaged. It is published weekly at $2 per year, at Syracuse—edited by Edward Cooper, Esq. We recommend it to the attention and support of the public.

The Railroad Journal.—This valuable Journal is published weekly, 16 pages quarto, by D. K. Minor, 23 Chambers-st., New-York, at $3 per year. It contains extensive tables showing the length, cost, income, dividends, &c., of *most* of the *American and English* Railroads and Canals; also the most recent accounts of important improvements in the construction and management of railroads, and railroad machinery. It will be found useful to *Engineers, Directors, and Stockholders* of Railroads, who should all be familiar, as well as what is passing abroad as at home, in relation to this rapidly advancing cause.

FOREIGN.

We have files of foreign papers to Oct. 2. Accounts concur in the statement of a deficiency of bread-stuffs. both in Great Britain and on the continent. Of the causes of this deficiency, we are not fully informed. The occurrence of wet weather while the harvest was going on, it is stated produced in many districts, great damage. But the very general failure of the potatoe crop, throughout a large portion of Europe, has undoubtedly been the means of greatly enhancing the price of grain. Ordinarily, potatoes constitute the chief support of the peasantry in many parts of those countries, and it is natural that the withdrawal of that great source of sustenance should cause a rise in the value of grain, and perhaps create a demand beyond the ability to supply without recourse to foreign markets. Whether, however, the prospect of a market for our bread-stuffs in Europe is such as to justify the advance which has here taken place, we are unable to decide. The rise in the British markets, (the news of which by the Great Britain steamer created so much stir among our flour and grain dealers,) is said to have been partly the result of "home deficiency and the numerous orders received from Holland and Belgium for the purchase of foreign wheat under lock, for immediate shipment to those countries, where, it is affirmed, a most alarming deficiency is apparent in the potato crop."

The Mark Lane Express observes in relation to the loss of the potato crop: "The extent of the damage caused by the potato disease is alarmingly great. Not only is such the case in almost every locality in England, but it has extended itself into parts of Ireland, Scotland, and the Channel Islands. It is impossible to say where it will end; but we most seriously regret this circumstance, which must affect the poorer classes of society, and entail a vast amount of misery among them. Various remedies have been proposed to stop the disease, none of which have, we fear, been found successful."

In Holland, (as before mentioned,) Denmark, and many parts of France and Germany, this potato malady has during the past season greatly prevailed, and much suffering among the poorer classes of the population is feared in consequence. Speculation in regard to the cause, is still rife, though but little has yet been settled. One of our latest English papers says—"our best microscopist cryptogamists are divided in opinion as to whether the cause of the calamity is a fungus or not."

Death of Earl Spencer.—We regret to learn by our late English papers, the death of this devoted friend of agriculture. We believe his death was quite sudden, but we have not the particulars in regard to the cause.

☞ The English *Farmer's Herald* is copying from this paper, the communications of our Scottish correspondent on the Rotation of Crops in the Lothians. The editor introduces the first of the series as follows:—"We are indebted to the *Cultivator*, an American paper, for the following letter, the first of a series upon this most interesting and important subject. Mr. Girdwood, the writer, is evidently well qualified for the task he has undertaken, and we shall have pleasure in making our readers further acquainted with him. To every farmer in Britain or Ireland the excellence of the culture in the Lothians of Scotland has long been familiar as his household gods, at least by reputation. The present series of letters from Mr. Girdwood will show the world how that excellence has been obtained." The same paper, copies Mr. Horsford's 5th Letter on German Farming; and the London *Gardener's Chronicle* of Sept. 27, copies the remarks of Mr. Bacon, on the Potato Rot, from our June number.

SHOW OF THE AMERICAN INSTITUTE.

We attended the exhibition of stock, &c., of this institution, which took place at New-York, on the 14th and 15th of last month. In point of numbers and quality, we think the present exhibition was much superior to any former one. The horses were the first which met our attention, of which there was a numerous collection. Among them we particularly noticed *Sir Painter*, owned by Epenetus Howe, of North Salem, Westchester county, N. Y. He is a beautiful thorough bred animal, evidently possessing great power and courage. We also noticed several other fine horses, particularly *Florizel*, owned by Mr. Crosby, of Watervliet, and others, whose owners' names we did not learn.

There were several pairs of very large, strong mules, shown. We noticed several which we thought were over 15 hands high. There was also a pair which were perfectly white, a very unusual color for this animal.

Of cattle, there were several fine Durham bulls, and a few good cows. The principal competitors were Messrs. Bell & Morris, Woolsey and Dr. Poole, of New-Jersey. The letter gentleman also exhibited some very pretty full blood Alderney cows. There were several very fine Devons, belonging to Mr. Colt, of New-Jersey. Mr. Blakesly, and we think some others, from Connecticut, also showed some good Devon bulls.

In the sheep department the show was very good—in the long wooled breeds it was indeed quite superior, both in numbers and quality. Among the competitors in this class we noticed Messrs. Hallock, McIntyre, and Bathgate, all having excellent stock. The South Downs were not numerous, though we noticed a few good ones.

Excellent Merinos were exhibited by Messrs. Jewett, of Vt., and Blakesly of Ct., and some, a cross of Saxon and Merino, by Mr. Smith, of Ct., which attracted much attention.

There was a considerable assortment of poultry, the most curious of which were a pair of *snow-white* Guinea fowls, offered by S. F. Jones, of New Brighton. They were perfect *albinos*, having been bred from the ordinary grey-spotted species. The same person showed also, some immense Java fowls, and capons from the Bucks county breed.

The mechanical, horticultural, and floral department of the exhibition, we had not time to examine with the attention requisite to obtain a just idea of it. It was however acknowledged to be superior to any previous show, and may be pronounced a splendid affair. We glanced for a few moments at the implements, &c., a patent brick moulder, by A. Hall, Coxackie, N. Y.; a horse-power by Mr. Burrall, of Geneva; a superior cooking closet, by J. Grimes, New-York; a shower bath, (very convenient,) by John Locke, New-York, and an excellent water filter.

DOWNING'S FRUIT AND FRUIT TREES OF AMERICA.

We have already given our opinion on the high merits of this work, and have made a few extracts as specimens of what it contains, to which we here add a few; our readers will however remember that such small portions can afford at best but a very inadequate knowledge of a well arranged and copiously enriched whole; and the book itself must be had by all who would receive the benefit of the inexhaustible fund of information it contains.

Much interest has been excited relative to the efficacy of *salt* as a preventive of the *curculio*. The author's experience is given in the following statements:

"Insects, the larvæ or grubs of which harbor in the ground during a certain season, as the curculio or plum weevil, are all more or less affected by the application of common salt as a top dressing. On a larger scale—in farm crops—the ravages of the cut-worm are frequently prevented by sowing three bushels of salt to the acre, and we have seen it applied to all kinds of fruit grounds with equal success. Salt seems to be strongly disagreeable to nearly all this class of insects, and the grubs perish even where a small quantity has for two or three seasons been applied to the soil. In a neighborhood where the peach worm usually destroys half the peach trees, and where whole crops of the plum are equally a victim to the plum weevil, we have seen the former preserved in the healthiest condition, by an annual application of a small handful of coarse salt about the collar of the tree at the surface of the ground; and the latter made to hold abundant crops, by a top dressing applied every spring, of packing salt at the rate of a quart to the surface occupied by the roots of every full grown tree." p. 53. "Common salt we have found one of the best fertilizers of the plum tree. It not only greatly promotes its health and luxuriance, but from the dislike which most insects have to this substance, it drives away or destroys most of those to which the plum is liable. The most successful plum grower in our neighborhood, applies, with the best results, half a peck of coarse salt to the surface of the ground under each bearing tree, annually, about the first of April." (p. 266.) Those who have tried salt the present season, in the western part of the state, speak of its effects as very decidedly beneficial in saving the plum crop.

On the subject of *repelling insects by odors*, the following remarks will doubtless be very useful to many:

"In the winged state, most small insects may be either driven away by powerful odors, or killed by strong decoctions of tobacco, or a wash of diluted whale oil or other strong soap. Attention has but recently been called to the repugnance of all insects, to strong odors, and there is but little doubt that before a long time, it will lead to the discovery of the means of preventing the attacks of most insects by means of strong-smelling liquids or odorous substances. The moths that attack furs, as every one knows, are driven away by pepper-corns or tobacco, and should future experiments prove that at certain seasons, when our trees are most likely to be attacked by insects, we may expel them by hanging bottles or rags filled with strong-smelling liquids in our trees, it will certainly be a very simple and easy way of ridding ourselves of them. The brown scale, a troublesome enemy of the orange tree, it is stated in the *Gardener's Chronicle*, has been destroyed by hanging plants of the common chamomile among its branches. The odor of the coal tar of gas works is exceedingly offensive to some insects injurious to fruits, and it has been found to drive away the wire worm, and other grubs that attack the roots of plants. The vapor of oil of turpentine is fatal to wasps, and that of tobacco smoke to the green fly." (p. 54.)

"*Moths and other insects which fly at night*, are destroyed in large numbers by the following mode, first discovered by Victor Adouin, of France. A flat saucer or or vessel is placed on the ground, in which is placed a light, partially covered with a common bell glass besmeared with oil. All the small moths are directly attracted by the light, fly towards it, and in their attempts to get at the light, are either caught by the glutinous sides of the bell glass, or fall into the basin of oil beneath, and in either case soon perish. M. Adouin applied this to the destruction of the *pyralis*, a moth that is very troublesome in the French vineyards; with two hundred of these lights in a vineyard of four acres, and in a single night, 30,000 moths were killed, and found dead on and about the vessels. By continuing this process through the season, it was estimated that he had destroyed female moths sufficient to have produced progeny of over a million of caterpillars." (p. 55.) After recommending bonfires of shavings, and flambeaux of tow dipped in tar, as very efficient modes of destroying the apple-worm moth, and melon-bug, the author remarks, "A simple and most effectual mode of ridding the fruit garden of insects of every description, which we recommend as a general extirpator, is the following. Take a number of common bottles, the wider-mouthed the better, and fill them about half full of a mixture of water, molasses, and vinegar. Suspend these among the branches of trees, and in various parts of the garden. In a fortnight they will be found full of dead insects, of every description not too large to enter the bottles—wasps, flies, beetles, slugs, grubs, and a great variety of others. The bottles must now be emptied, and the liquid renewed. A zealous amateur of our acquaintance caught last season in this way, *more than three bushels* of insects of various kinds; and what is more satisfactory, preserved his garden almost entirely against their attacks in any shape."

Some interesting and striking instances are occasionally given of the productiveness of single trees, and of the profits of fruit culture:—

"Although the apple generally forms a tree of medium growth, there are many specimens in this country of enormous size. Among others we recollect two in the grounds of Mr. Hall, of Raynham, Rhode Island, which, ten years ago, were 130 years old; the trunk of one of these trees then measured, at one foot from the ground, thirteen feet two inches, [in circumference,] and the other twelve feet two inches. The trees bore that season about thirty or forty bushels, but in the year 1780 they together bore one hundred and one bushels of apples. In Duxbury, Plymouth county, Mass., is a tree which in its girth measures twelve feet five inches, and which has yielded in a single season, 121¼ bushels." (p. 57.)

"There are [pear] trees on record abroad, of great size and age for fruit trees. M. Bosc mentions several which are known to be near 400 years old. There is a very extraordinary tree in Home Lacy, Herefordshire, England—a perry pear—from which were made more than once, 15 hogsheads of perry in a single year. In 1805 it covered more than half an acre of land, the branches bending down and taking root, and in turn producing others in the same way. Loudon, in his recent work on trees, says it is still in fine health, though reduced in size.

"One of the most remarkable pear trees in this country, is growing in Illinois, about ten miles north of Vincennes. It is not believed to be more than forty years old, having been planted by Mrs. Ochletree. The girth of its trunk, one foot above the ground, is *ten feet*, and at nine feet from the ground, *six and a half feet*; and its branches extend over an area sixty-nine feet in diameter. In 1834, it yielded 184 bushels of pears; in 1840, it yielded 140 bushels. Another famous specimen, perhaps the oldest in the country, is the *Stuyvesant pear* tree, originally planted by the old governor of the Dutch Colony of New-York, more than two hundred years ago, and still standing in fine vigor, on what was once his farm, but is now the upper part of the city, quite thickly covered with houses."[*]

The great profits sometimes derived from the sale of fruit of well selected varieties, are evident from a single fact in relation to the *Frost Gage*, a fine late plum, which commands from two to five dollars a bushel in market:—

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[*] This old tree standing at the corner of 3d Avenue, and 13th street, is evidently on the decline, as it now appears less vigorous than it did a few years ago, hard pavements evidently being less favorable than cultivated soil. A few rods from this tree, is a *cherry* tree, also planted by old governor Stuyvesant, now in the garden of Robert I. Murray, of 14th-street, which annually yields heavy crops.—*Ed.*

“Eighteen hundred dollars have been received by a single farmer in this vicinity, for a single season's crop of this plum.” (p. 300.)

The frauds of dishonest nurserymen are occasionally mentioned; an instance of which is given by the notice of the “Tobacco-leaved cherry,” sold under the imposing name of “*Four to the pound*,” which would make the cherries about twice the size of common hen's eggs. The leaves of this variety are very large and coarse, and thus well calculated to facilitate the fraud, but the fruit is very small; hard-fleshed, with a large stone, and of inferior flavor.

Under the description of the Monarch pear, considered by T. A. Knight with whom it originated, as superior to all others, are the following remarks:—

“By some unlucky error, Mr. Knight transmitted to this country, and disseminated partially in England, several years ago, grafts of a worthless sort, for this fine pear, which in no way resembled it. The false sort was pretty largely propagated and distributed before the error was discovered.” * * * “Mr. Knight was deeply mortified at this accidental error, and is said to have remarked, that he would gladly have sacrificed £10,000 rather than it should have occurred. Would that some nurserymen were as conscientious!” And hence the importance of propagating for sale or general distribution such fruits only as have been well proved from bearing trees, without depending merely on the authority of others.

In another place the author truly remarks, “Some nurserymen here, we regret to say, do not scruple to fill large catalogues with the names of varieties which have no corresponding existence in their grounds.”

Those who have largely disseminated the numerous foreign pears lately introduced in our country, before a thorough trial of their qualities and fitness for the climate, should receive a caution from the following fact:

“The most successful cultivator of pears in this country, whose collection comprises hundreds of varieties, lately assured us that if he were asked to name all the sorts that he considered of *unvarying and unquestionable excellence* in all respects, he could not count more than *twenty!*” The author very justly adds, however, “It may then be asked, why do all cultivate so large a variety. We answer, because the quality of many is yet not fully decided; again, there is a great difference in taste, as to the merits of a given sort; there are also some sorts so productive or handsome, &c., that they are highly esteemed, though only second rate. In a work like the present, we are also obliged to describe many sorts of second quality, in order to assist in identifying them, as they are already in general cultivation.”

In ripening winter pears, some care and skill are required. A want of this has induced some cultivators to reject as worthless some truly fine varieties. The following directions are given:—

“Winter dessert pears should be allowed to hang on the tree as long as possible, until the nights become frosty. They should then be wrapped separately in paper, packed in *kegs, barrels, or small boxes*, and placed in a cool, dry room, free from frost. Some varieties, as the D'Aremberg, will ripen freely with no other care than placing them in barrels in the cellar, like apples. But most kinds of the finer winter dessert pears should be brought into a warm apartment for a couple of weeks before the usual season of maturity. They should be kept covered, to prevent shrivelling. Many sorts that are comparatively tough if ripened in a cold apartment, become very melting, buttery, and juicy, when allowed to mature in a room, kept at the temperature of 60 or 70 degrees.”

Bone Manure.—R. M. Bailey says in the American Agriculturist, that some of the most extensive farmers of Long Island, use annually from 500 to 1000 bushels of ground bones on their lands, applying it at the rate of 35 to 56 bushels per acre; and that some of the poorest farms have thus been made fertile and productive, within the last fifteen years.

FARM OF J. F. SHEAFE.

In August last we had the pleasure of making a call at this fine farm, which is called High Cliff, and is situated in the town of Poughkeepsie. It appears that it has received the first premium from the Dutchess county Agricultural Society as the best cultivated farm in the county. We are not surprised at this, for though our examination of it was necessarily hasty, we could not fail to observe the evidences of good management which are so conspicuous. The following extract from the report of the committee which awarded the premium referred to, will give a more just view of the farm than we are able to furnish from our hasty visit. We would call particular attention to the *exactness* with which all the operations on Mr. Sheafe's farm are recorded—a plan which we wish might be generally adopted.

The committee through their chairman, cannot let the opportunity pass of expressing their pleasure and approbation of the high state of cultivation, and many improvements they witnessed on this farm. It consists of 230 acres, divided into 13 lots by substantial stone walls, with lanes leading to each lot, and gates hung in the most substantial manner; all the hedgerows, elders, &c., along the fences, carefully extirpated, and no weeds to be seen; all the loose stones carefullypicked up and laid in walls; the land appeared to be in a high state of cultivation, and well seeded and manured. Lime has been used with good effect as a manure, also horn shavings, muck, barn-yard manure, &c.

“The farm buildings were in excellent order, and could not but excite the admiration of the committee. The cow stables, are excellently arranged, the name of each cow being placed over her separate stall, where she can enjoy her food without being annoyed by her neighbors, and she being sheltered from the storms of winter, and being carefully bedded with straw, the manure is saved from being leeched by rains. The committee would recommend the stabling of cattle to all farmers, (the stables can be made less expensive than these) as a great saving of fodder, manure, &c., adds to the comfort of the cattle, and they believe in a very short time would repay the farmer for the expense of a shed.

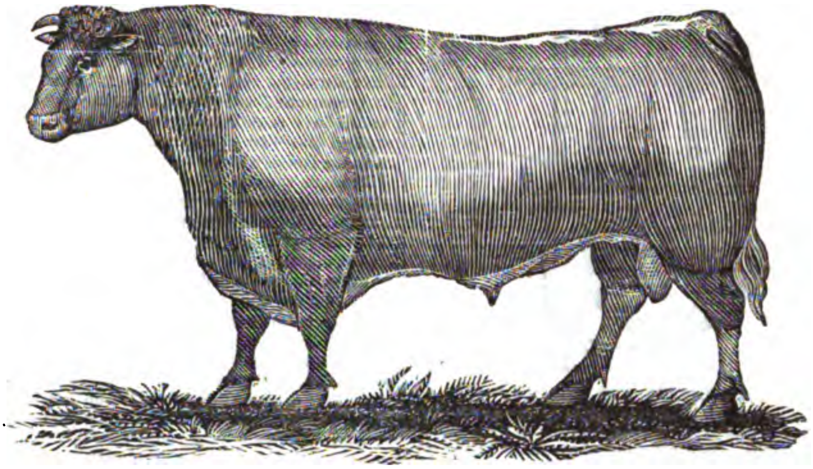
“The barns and sheds appear to be very conveniently arranged, being placed on the side of a knoll, and the hay, &c., pitched in the windows of the sheds.

“Mr. Sheafe has been erecting a superior hay press which appeared to be made in the most substantial manner. He has also an office erected near his farm buildings, where his farmer keeps a set of books, being a journal of every day's work, the expense of every field and crop; the age, pedigree, &c., of all the stock. In the office is a platform scale to weigh every thing necessary; also a map of the farm, containing the quantity of land in each field, each lot being numbered and surveyed. Indeed the old adage, “a place for everything, and every thing in its place,” appeared to be verified here. The piggery also appeared well adapted to its purpose, well filled with old and young porkers. The farm house and dairy cellar appeared excellent and well arranged.

“The Committee were shown some beautiful farming implements, among them a subsoil plow to break up the hard pan in heavy land, following the common plow, also other plows. All of them appeared well adapted for the work to be done—a plaster sower; straw and root cutter, &c.

“This farm is used principally for grazing. The Committee were shown a beautiful herd of improved short horns, well adapted either for the dairy or the shambles; also a flock of Southdown sheep. It would take too much time to mention everything worthy of note. This farm has been under the management of Mr. James H. Lawson, for a number of years, and too much credit cannot be awarded him for the skill and judgment shown in everything appertaining to the farm.”

Birds *vs.* Insects.—The north of France is distinguished by a deficiency of trees and hedge-rows and affords consequently but little shelter for birds. The effect is as obvious as it is injurious, and destructive insects, unchecked by their natural enemies, commit extensive ravages.



FORTUNATUS, *alias* HOLDERNESS.—(Fig. 96.)
A Short-Horn bull imported by GORHAM PARSONS, ESQ., *of Massachusetts, in* 1818.

LIVE STOCK IN CONNECTICUT.—(*Continued.*)

EAST-WINDSOR, as we have mentioned, was noted at an early period for the excellence of its cattle. The first time we were ever in Boston, we recollect having seen at the Columbian Museum, the stuffed skin of "The Great Connecticut Ox." This ox, as we are informed by Henry Watson, Esq., was bred by Mr. Elizur Wolcott, of East Windsor, and sold about the year 1809. His weight, when slaughtered, was 2,133 pounds. Mr. Watson thinks this ox was descended from a bull introduced here by Mr. Samuel Wolcott, previous to 1790. Many other animals quite as remarkable as this ox, were bred in this town more than thirty years ago.

In 1827, Mr. John Watson purchased of Col. Jaques, of Massachusetts, a short-horned bull called *Holderness*. Mr. W. had kept him one year previous to the purchase. This animal, under the name of *Fortunatus*, was imported by the late Gorham Parsons, Esq. of Massachusetts, in November, 1818. He was a bull of considerable celebrity in Massachusetts and Connecticut for several years. In 1819 he received from the Massachusetts Society for Promoting Agriculture, the premium of *one hundred dollars* as the best imported bull at the society's show at Brighton that year. From a letter we received from Mr. Parsons several years ago, we learn that Holderness was bred at North Allerton, Yorkshire, (Eng.,) by George Faulkner, Esq., of whóm he was purchased by Mr. P.'s agent, who was directed to obtain the best stock to be had. In a hand-bill issued in 1820, he is described as follows:—"His color is bright chestnut, skin yellow, horns uncommonly light and finely curved." There is no doubt that he belonged to the best variety of what were called in that day, the "Teeswater" cattle. His progeny were generally hardy, thrifty, and excellent milkers, often carrying prizes at the Massachusetts state and county shows as well as the shows in Connecticut. The quality of his flesh was not probably as good as that of some animals, though his progeny from common cows were not generally complained of in this respect.

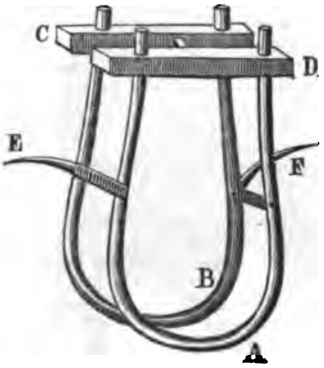
The figure at the head of this article was copied from one taken of Holderness in 1828. With the exception of the neck, which is represented with somewhat less dewlap than belonged to the animal, it is said by those who remember him, to give a very good outline of his leading characteristics.

The Short-Horns of the district of Holderness, Yorkshire, had long since the reputation of great milkers, and it was probably this circumstance that induced Mr. Parsons to substitute for this bull the name of Holderness for that of Fortunatus. The result, however, was doubtless injurious to the reputation of the bull and his progeny. Among those acquainted with the history and characteristics of the old Holderness breed, the idea was at once received that the animal was of this race, which Lawrence describes as one "of the worst shaped and least profitable. * * * Slow feeders, never fat, and the flesh excessively coarse." These characteristics would be by no means generally applicable to Mr. Parsons' bull and his stock.

Mr. Samuel Bartlett, (lately deceased,) of East-Windsor, bred and fatted a pair of oxen got by Holderness, which he sold on the foot, in Wilbraham, Mass., on the 17th of November, 1833, they being then seven years and eight months old. Their live weight at this time, as certified by a sworn surveyor, was individually 3,740, and 3,709—total 7,449. Mr Bartlett informed us that the dressed weight of these cattle was rising 5,200 lbs. Mr. Bartlett showed us on his fine farm, (a pattern of good management,) several superior milch cows which have more or less of the blood of Holderness. We likewise saw several of the same blood in the neighborhood, one of which, a half-blood Holderness, had the appearance of an extraordinary milker, and was said to have made fourteen pounds of butter per week, fed on grass only. A son of Mr. Bartlett has some full blood Durhams. We saw a cow and a pair of steers which look well. Mr. John Bissell showed us several good cows, a pair of very large, strong oxen, and some thrifty steers.

Henry Watson, Esq., has quite a herd of full blood Durhams. He has been in possession of this stock almost from the introduction of the breed into the country. He first purchased some full bloods of Stephen Williams, Esq., of Northborough, Mass., (the owner of Young Denton,) which were afterwards crossed with Wye Comet, purchased by Mr. Watson of Col. Powell, of Philadelphia. Since then he purchased some cows of the late Hon. Stephen Van Rensselaer, of this city. He has likewise several of the progeny and descendants of the fine Durham stock imported in 1830 by Enoch Silsby, Esq., of Massachusetts. He has used high bred bulls of various families. Several of his cows show fine points, and have the appearance of being capital milkers. His Young Agatha, a calf of Mr. Silsby's imported Agatha, is a cow of great substance, good symmetry, and Mr. Watson assures us, is the best milker he ever owned. Taking her in all respects, she is a superior cow, even among the *famed ones* of the celebrated breed to which she belongs.

At the farm of Orren Thompson, Esq., principal of the Thompsonville Manufacturing company, we saw the bull *Sir Dick*, and two cows, imported by Mr. T. a year or two since. The cows were very large, and were said to have been selected in England on account of their great milking qualities. They were, however, very thin in flesh when we saw them, being evidently too large for the thin soil and short pasture of that section.



REMEDY FOR COWS SUCKING THEMSELVES.—(Fig. 97.

A subscriber inquires for a plan to prevent cows from sucking themselves. We give the above cut and the following description, as the best plan we have met with. It was furnished for the Cultivator by R. North, Jr., of Berlin, Conn., in 1842.

Description.—A and B, in the cut, represent two ox-bows, of a size suitable for the animal for which it is intended. The bow marked B, should be a little the largest, corresponding with he size of the neck at the shoulders. C and D, represent the yoke or neck piece. It is formed of two pieces of wood of a size say 1¼ by 2¼ inches and framed together by means of a cross piece, which gives it the appearance of the letter H. In this yoke are bored four holes of the size of the bows, and at such distance apart as would best receive them. Across the bows, midway from the bottom to the neck piece, are riveted two pieces of iron marked E. and F. These pieces have a spiral termination. They should be bent out somewhat, lest they unnecessarily pierce the sides of the animal.

FATTENING ANIMALS.

It should be made a primary object to fatten animals intended for slaughter as rapidly as possible, if we wish to obtain the greatest quantity of meat in proportion to the food consumed. The reason is this: It takes a certain amount of food, daily, to support life, or to supply the natural waste of the body. For instance, suppose fifteen bushels of meal and five hundred pounds of hay will bring an animal to a certain degree of fatness in forty days; that is, allowing a peck and a half of meal and twelve and a half pounds of hay to be consumed daily. Now suppose it takes a fourth part of this daily allowance to sustain life and supply the waste of the body; then, if instead of feeding out our whole quantity of food in *forty* days, we prolong the time to an *hundred and sixty* days, the food would be wasted, and the trouble and labor of feeding expended for nothing; as the animal might be in worse condition at the expiration of that time than when we began feeding.

This is a matter which has been too little regarded, and as a consequence, there has been a useless expenditure of food and labor. In the animal economy, the accumulation of fat and extra flesh, is only a deposit of superfluous nutriment, which not being required by the system at one time, is laid by for future emergencies; and it must be obvious that the larger the quantity of food which a fattening animal can be made to consume daily, with a good appetite, or to digest thoroughly, the greater will be the amount of flesh and fat gained in proportion to the whole quantity of food consumed.

Another essential point in fattening animals, is to keep them in a quiet and comfortable condition. We do not propose to engage at present in a consideration of the relative action of the different organs of the animal body. Every farmer has, however, more or less noticed the connection which the nervous system has with the digestive and secretive organs. An animal may consume a large amount of food, but if it is so situated that it is restless and discontented, the accumulation of fat will be only at a slow and unprofitable rate. We have seen hogs and cattle intended for slaughter, rendered so entirely uncomfortable from the coldness and filthiness of their situation, that they scarcely throve at all, though they consumed and wasted much more food than they would have required if properly cared for. Hence the saying, that "an animal will fret off flesh faster than it can be gained."

Animals should not be confined to wet and muddy places—above all things they should not be obliged to take their food in such places. Cattle and sheep that are fed with grain and vegetables, should be provided with clean mangers. Fatting hogs should be fed in clean troughs, or on clean dry floors, and their sleeping places should be dry and sufficiently warm. They should not be expected to perform much labor in the compost-yard; that service should be rendered while they are in working trim, and not after they are full fed and are becoming overloaded with fat. All exertion is attended with a waste of muscular tissue, and the more laborious the exertion, the greater is the expenditure. Hence the increase in weight will be most rapid by allowing the animal to remain as much at rest as is consistent with the preservation of its health.

Substances in which the nutriment is much concentrated, should be fed with care. There is danger, especially when the animal is first put to feed, that more may be eaten at once than the digestive organs can manage. Meal of Indian corn is highly nutritive, and when properly fed causes animals to fatten faster than almost any other food. They will not, however, bear to be exclusively kept on this article for a great length of time. Meal made from the heaviest varieties of corn, especially that from the hard flinty kinds grown in the northern and eastern states, is quite too strong food for cattle, sheep, or horses, to be full-fed upon. Hence one of the advantages of having the cob ground with the corn, by which the nutriment is diffused through a greater bulk, lays lighter in the stomach, and is more thoroughly digested. The effect of pure corn meal on animals, we suppose to be similar to that sometimes produced on our own species by the use of fine wheaten flour—the subject becomes *dyspeptic*, and is forced to use bread which has the bran mixed with the flour. The mixture of the cob with the meal, answers the purpose of the bran—the health of the animal is preserved and the process of digestion goes on uninterruptedly. In fact the advantages of grinding the cob and corn together for feeding cattle may be said to be well established. For hogs, the benefit of the cob, is not, we think, so evident; those animals appearing to be better adapted for taking their nourishment in a concentrated form, than those which ruminate, or chew the cud. Yet food sufficiently bulky to effect the distention of the bowels is necessary for hogs.

Hay or straw, cut into lengths so short as to be readily mixed with meal, answers a good purpose in rendering the meal easy of digestion, and in enabling the animal to extract from it all the nutriment.

Much has been said on *cooking* food for stock, and it seems to have been pretty well settled that for hogs, it is attended with considerable advantages, but as regards cattle, we are yet without any reliable experiments made in this country. The Highland Society of Scotland, instituted a series of experiments a few years ago, with a view of ascertaining the advantage, if any, of cooking different kinds of food for different species of animals. The conclusion arrived at from the result of these experiments, was, that the superiority of cooked over uncooked food for *cattle* is but trifling, and not sufficient to balance the cost; but for hogs, the extra cost of preparation was repaid. The articles tried were turneps, potatoes, barley, and oatmeal, oil-cake and flax seed. We do not advert to these experiments as altogether conclusive, though as before said, we could not advise the outlay of much expense for cooking food for cattle, till some additional light shall indicate its advantages.

The appetite and health of animals are promoted by giving a variety of food. This fact has led to the preparation of compounds for fattening stock. An article called "Warnes' Compound," (see last vol. Cultivator p. 373, 374,) is much esteemed by British farmers, for fattening cattle. For fattening hogs, we have used with advantage the following mixtures. 1. Two parts potatoes and two parts pumpkins; boil together till they can be easily mashed fine—then add one part meal, stirring and mixing intimately together. The heat of the potatoes and pumpkins will scald or cook the meal, and when cold the mixture will be a stiff pudding. 2. Two parts potatoes, and two of ripe, palatable apples, (either sweet or sour;) boil till they can be mashed fine—then add one part meal, (either that from corn, barley, or oats and peas, allowing the same weights,) and mix together while the potatoes and apples are hot.

Hogs seem more fond of this food when it has slightly fermented, (not become pungently sour,) and they appear to fatten faster if it is fed in this state. We have never seen hogs thrive faster than when fed on these mixtures, with occasionally a little dairy-slop, and we have always found the pork solid and of good quality.

In regard to the relative value, compared with grain, of different kinds of vegetables for feeding stock, there is, perhaps, more diversity of opinion than on almost any other branch of husbandry. Some, for instance, believe that four bushels of potatoes are equivalent to one bushel of corn meal; others think potatoes should be reckoned higher; others again hold them less valuable, while some declare that stock will scarcely fatten at all on potatoes, and that for milch cows, if they increase the quantity, they injure the quality of the milk. It is not easy to understand fully the cause of such contrary opinions; but there is no doubt that it may be considered partly attributable to the different degrees of nutriment which the same kinds of vegetables possess when grown on different soils, and under different circumstances, and partly to the different systems observed in feeding. According to some chemical analyses, turneps and other vegetables contain considerably more nutriment when grown on some soils, or by the aid of some manures, than when produced on other soils. Potatoes produced in soils deficient in carbonaceous matter, are acknowledged to be less nutritive than others.

But probably the principal cause of vegetables having been undervalued for animals, is their having been used in an improper manner. Boussingault and his associates restricted the food of certain animals to potatoes, turneps, mangel wurtzel, and carrots, and from the result of this experiment, inferred that these vegetables would not fatten swine or cattle—that they reduced the flesh of milch cows, and made the milk poorer—and that all the butyraceous particles the milk contained came from the fat previously deposited in the system.

Without attempting to discuss this matter in detail, we would remark that to a *practical* man, accustomed to feeding animals with vegetables, these results, though at variance with others, would not appear strange. It is well known that graminiverous animals require food of a fibrous nature, and that an essential function of some species, rumination, cannot be carried on without it. It is also known that the articles alluded to have, when fed by themselves, a laxative or cathartic action; and thus for various reasons, we see the necessity of feeding straw or hay with vegetables, in order to enable the animal to derive full benefit from them. In the experiment of Boussingault, the animals, it should be remembered, were confined to the vegetables, without any fibrous or absorbing substances to check the tendency to purgation, and keep the food in the intestines in such a state, and for such a length of time, that the nutritive particles could be assimilated. If the animals had been fed wholly on corn meal or wheat flour instead of potatoes and turneps, the effects would not, probably, have been precisely similar, but no practical farmer would expect stock to thrive or continue healthy for any considerable length of time on either of these substances. And yet we do not see why it might not with as much propriety be argued from a failure to fatten stock on meal and flour, that it was owing to a deficiency of nutriment in these articles, as that the failure in the former case was attributable to this cause.

Preparations should be made for winter as soon as possible.

DISEASE IN THE POTATO.

WITH the exception of the state of Maine and the British Provinces of New Brunswick and Nova Scotia, we think the potato crop has not this year been as much injured in this country by what is called *rot*, as it was in either of the two years last preceding the present. In Europe, however, the ravages of the disease have been more extensive than ever before. The foreign journals teem with accounts from all quarters of the injury suffered, and with various conjectures and theories as to to the nature of the cause and remedy.

The Edinburgh Quarterly Journal publishes a letter from Professor JOHNSTON in which he makes the following remarks:—

"This disease in the potatoe has already called forth many hasty opinions, almost all partially true, because founded on one or two facts, but nearly all unsound as general expressions of the truth, since they are contradicted by the experience of other practical men in other districts of the country. We are clearly unable as yet, to assign either any general cause for the disease or any universal remedy. Something may possibly be suggested by the analysis of sound and diseased potatoes, for which the Highland Society has offered a premium, though, in the present state of our knowledge upon the subject, even this is doubtful. The most that chemistry has yet done for this question is in the shape of suggestions for experiment."

The Buffalo *Pilot* furnishes a translation of a paper originally prepared by Prof. CHAS. MORREN, of the University of Liege. He conjectures that the disease proceeds from a description of mold or fungus. It may be said that this theory has the appearance of plausibility, as the blight or blast in grain, has been pretty clearly traced to a fungus; the spread and increase of which is however, greatly dependent on the weather, heat and moisture, or a damp sultry atmosphere, favoring its propagation. But until something more shall have been actually proved by experiment or practice in regard to the prevention of the difficulty complained of, we do not think it necessary to occupy much space in giving theories in reference to the cause of the disease or its remedy. We give place notwithstanding to the following extract from Prof. Morren's paper, which we are sure will at least be read with interest:

"For some time I have been in the daily habit of observing from stage to stage, the progress of the disease in various fields of potatoes. It commences unquestionably, with the leaves and superior parts of the plants. I have even observed the flowers and balls first attacked. A part of the tissue becomes unhealthy, loses its color, and changes rapidly to yellow; the spots then become gray, and within a day or two subsequently, the under side of the leaf and fruit will show a sort of white down or mold. The microscope shows that this down proceeds from a sort of fungus, that fructifies upon the pile, or beard, that thickly covers the under side of the leaf of the potato plant.

"This fungus is of an extreme tenuity; but reproduces in an incredible measure. Its trunk is composed of several erect, jointed fibres, bearing at their summits one or more branches, always double, and at the ends of which appear the reproductive bodies, in the form of an egg, but which do not really exceed in diameter the one hundredth part of a millimetre, or the 393,700 part of an inch. Perhaps it will be said that this is a small affair to make such ravages, but I would ask is the itch a disease less to be feared, because the animals producing it exist only in a microscopic state?

"Immediately following the formation of the yellow spot, and the developments of the *botrydis* upon the potato leaf, the stem begins to feel the deleterious influence. Here and there the epidermis begins to turn brown, and finally black; and when the phases of the disease are carefully watched, through the microscope, it will be readily perceived that it is in the bark the fatal germ exists. The morbid agent communicates its action from the bark to the inner epidermis, and although this latter does not always show the fungus itself, yet it is not the less fatally affected. To those who have any idea of vegetable physiology, these effects are easily enough explained. The sap, modified into living juices, into vegetable blood, is formed in the leaf, and descends to the stem and roots, through the bark. Here this sap, or blood, if we please, becomes diseased, and carries the poison of the leaf through the fibres of the whole plant, and the stalk perishes. In fine, so soon as the black spots appear upon the stalks, the leaves dry up and wither, the plant droops, dies and falls to the earth, to disseminate a million fold, the poisonous canker."

ORIGIN OF THE MORGAN HORSE.

Mr. Weissinger, one of the editors of the Louisville (Ky.,) Journal, has lately made a tour through the northern and eastern states, and while in Vermont took pains to examine the best horses, and to learn all particulars relative to the breed and mode of management. In relation to the origin of the celebrated Morgan horses he has, however, given a statement, said to have been furnished by Mr. Cotterel, of Montpelier, which we cannot but think is at variance with well established facts. To give a full understanding of the case, we herewith copy the statement of Mr. Cotterel, as given in Mr. Weissinger's letter published in the Journal, and then offer counter testimony:

"Mr. Cotterel, of this place, [Montpelier,] who is as well acquainted with horses as any man in Vermont, says there is not the slightest doubt that the original Morgan was got by a Canada horse. He says the most probable account of his origin is this. A man by the name of Smith, at Plainfield, N. H., had a fine imported mare. He rode this mare to Canada on a courting expedition, and while there his mare got in foal. Smith regretted the accident, and laying no value upon the colt, he sold it to Morgan, a singing master, who, when the colt was grown, rode him about on his singing circuit. When the colts from Morgan's horse grew up they proved fine, and this gave him celebrity. He was a fleet runner at short distances, and this originally induced the people to try him."

In the ninth volume of the Cultivator, we published some letters from Justin Morgan and John Morgan, which in our opinion furnish the most authentic history of the origin of this race of horses that has yet appeared. Indeed, so far as it goes, we have the fullest confidence in its correctness. We republish the following extracts from those lettters. Justin Morgan, it will be remembered, is a *son* of the Justin Morgan who owned the original Morgan horse. Of course he speaks of many things according to his personal knowledge, leaving little chance for any mistake.

The following is an extract from a letter of Justin Morgan's, originally furnished for the Cultivator, (Vol. IX. p. 99,) dated Stockbridge, Vt., March 1, 1842. After stating that his father owned the horse from which the race of Morgan horses sprung, he says:—

"I will now relate the facts relative to said Morgan horse, as I reccollect them. My father, Justin Morgan, brought said horse, or rather said colt, into Randolph, Vt., in the summer or autumn of 1795. Said colt was only two years old when my father brought him to Randolph, and had never been handled in any way, not even to be led by a halter. My father went to Springfield, Mass., the place of his nativity, and the place from which he removed to Randolph, in the spring or summer of 1795, after money that was due to him at that place, as he said; and instead of getting money as he expected, he got two colts, one a three years old gelding colt, which he led, the other, a two years old stallion colt, which followed all the way from Springfield to Randolph; having been, as my father said, always kept with, and much attached to the colt he led. Said two years old colt was the same that has since been known all over New-England, by the name of the Morgan horse. My father broke said colt himself; and as I have before remarked, owned and kept him to the time of his decease, which took place in March, 1798, and said horse was five years old the spring my father died; and as before stated, soon after my father's decease, he passed from my father's estate into the possession of Wm. Rice, of Woodstock, Vt. I cannot state positively that my father purchased said colt in Springfield, Mass., but I am very confident that he purchased him in that town or in the immediate vicinity, on Connecticut river."

We next offer an extract from a letter of John Morgan, (see Cultivator, vol. IX., p. 110,) in which it will be seen that the material points set forth by Justin Morgan are confirmed, and some further light given in regard to the blood of the first Morgan horse. John Morgan resides at Lima, in this state, and is, we believe, a relative of Justin Morgan, sen., and was a near neighbor of the latter previous to his removal from Springfield to Vermont. In reference to the colt above described by Justin Morgan, (2d,) John Morgan says—"he was sired by a horse owned by Sealy Norton, of East Hartford, Conn., called the 'True Briton, or Beautiful Bay.' He was kept at Springfield one season by the said Justin Morgan, [sen.,] and two years after I kept him two seasons. This horse was said to have been raised by General Delancy, commander of the refugee troops on Long Island, and rode by him in the Revolution. It was said that one Smith stole the horse from the general at King's Bridge, while the general was in the tavern; ran him across the bridge and took him to the American army, near White Plains, and sold him to Joseph Ward, of Hartford, Conn, for $300. It was also said at that time that he was sired by the imported horse called 'Traveler,' said to have been kept in New-Jersey. Ward was a merchant and kept the horse three or four years for a saddle and carriage horse, and then traded him off to Norton, and Norton kept him for mares while he lived. The description of the Morgan breed given by Mr. G. Barnard, [Cultivator, vol. IX., p. 33,] answers well to the stock of 'True Briton.' I have always understood that Morgan kept the colt for a stallion at Randolph, and was very celebrated for his stock."

The above statements of Justin and John Morgan, comprise, as we believe, the true history, so far as *it* is known, of the origin of the far-famed Morgan horses. From the position of the Messrs. Morgan, they have had the best possible facilities for obtaining correct information on this subject, and we are not aware of any thing which should hinder their statement from receiving full credence.

Mr. Weissinger, in his letter to which we have above alluded, speaks of Mr. Hill's horse Black Hawk as follows: "I saw the celebrated Sherman Morgan, Black Hawk, at Bridport, and I think he deserves all the praise that has been bestowed upon him. He is the finest stallion I ever saw. His legs are flat and broad, shoulders well set back, loin and backbone very strong, length of hip beyond anything I ever saw; as quick in breaking as the bullet from the rifle; head and neck faultless; in motion, mouth open, crest sublime, legs carried finely under him, square and even, and fore-legs bending beautifully."

In relation to the characteristics and reputation of the Morgan horses, Mr. Weissinger observes:—"I have conversed with some of the best judges of horses and some of the most experienced breeders and horse dealers in the state. There is no doubt whatever of this—that the breed of the Morgan horse was, and is now, in the few instances where it can be found, far the best breed of horses for general service that ever was in the United States—probably the best in the world; and it is remarkable that this breed was and is now known by many striking peculiarities, common to nearly every individual. They have a full, heavy, wavy mane and tail, good head and neck, small well-shaped ears, are broad between the eyes, legs broad and short with large tendons, bodies rather thick set; but their most striking peculiarity is in their carriage; legs well under, trot quick, short, and springy, the fore-legs bending remarkably, the very reverse of the slow, slouchy movement of the race-horse in a trot. They are likewise exceedingly hardy and well tempered."

The following paragraph from Mr. Weissinger's letter contains facts worthy of preservation. Will some of our Vermont friends give us the *whereabouts* of the "Chelsea Morgan," with his owner's name?

"Of the old Morgan's progeny three became famon as stallions, viz: the Sherman Morgan, the Woodbury, or Burbank, and the Chelsea. Of these the Sherman Morgan was greatly the most distinguished. I have ascertained to a certainty that he died in the winter of 1835. Black Hawk was sired by him. The Chelsea Morgan is the only one of the three yet alive. He is said to be yet full of vigor."

ELECTRICITY ON VEGETATION.

The Syracuse Daily Journal, in noticing some experiments detailed in our September number, has arrived at an erroneous conclusion in one particular. He says we stated wrongly in saying that the electric fluid passes *through* the lightning rod, and adds that "it passes along the surface of the rod, and not *through* the body of the metal." Hence he infers that poor conductors, brought into contact with the surface of the rod, may be influenced and become electrified. Perhaps the subject would be better understood, if it were stated that the fluid passes THROUGH *the* SURFACE. We all know that it cannot pass through a solid non-conducting substance (without *breaking* a way for its passage,) yet if a conducting rod be solidly encased in glass or any other non-conductor, the latter offers not the slightest obstruction to its progress, which could not be the case, if it passed *on* the surface, as the Daily Journal seems to understand. That it is confined to the *surface* of *conductors* is demonstrated by many experiments, not necessary to state here.

When we said that a man might clasp a lightning rod in a thunderstorm, (in ordinary cases,) without injury, we spoke from experience. We have many times held a metal rod in contact with the hand, while a discharge from the electric battery passed through the rod unfelt, sufficient to have knocked the senses out of any man. But previous care had been taken that the communication through this rod was perfect. We have also examined a lightning rod, the point of which was melted into a bullet, by a discharge from the clouds so loud that a cannon would be a mere pop-gun to it, yet the wooden supports of the rod, which it passed through in contact, were not visibly affected in the slightest degree. It is only when the conductor is too small for the discharge, shown in this case by the melting of the point, and in others by the rod becoming red hot, that surrounding bodies receive a portion of the fluid. But in none of the experiments mentioned, to show the influence of electricity on plants, was this the case.

Green trees are conductors of electricity, yet we do not find that plants grow more rapidly at the foot of tall oaks and hemlocks, than elsewhere.

The Journal mentions the case of a grape growing more rapidly and maturing its fruit earlier at the foot of a lightning rod. We knew a similar case; but the superiority was then owing to the large bed of loose earth made in digging the hole for the reception of the rod six feet into the earth. In the present case some other cause may have operated, with which we are unacquainted.

Electro Culture.—We have heretofore cautioned our readers against a sanguine belief in promoting vegetation by means of electrical apparatus. We have heard no well authenticated case, among the many experiments which have been made this season, where vegetation has derived the least benefit from wires or stakes designed to govern or direct the electric principle. A like failure has, so far as we have heard, attended the trials in England and Scotland. The London Agricultural Gazette, states that—"all the experiments which have been heard from, show that no influence is exerted on the growth of plants by an electro-conducting connexion between elevated and buried wires, or according to other plans which have been tried. The word *electro-culture*, in fact, must for the present be considered a misnomer."

In relation to the failure of attempts at electro-culture, the writer of the article from which we have quoted the above, asks—"Has all this labor then been lost? That depends," he continues, "on the object of those who undertook it. Doubtless, some, believing in the evidence which before existed, have speculated in electro-culture as a means of profit—*their* labor certainly has been useless, and they must now blame either their own carelessness in not having previously sufficiently examined that evidence, or their own credulity in reference to what we must consider the imperfect observations of others. But wherever the subject has been tested by any one anxious merely to determine for himself the accuracy of a theory, the expense and labor which have been incurred cannot be considered lost, for the object of their outlay has been attained. An intelligently planned and carefully executed experiment, if its results be ascertained and recorded, cannot fail; it is simply a question asked of nature, and what the experimenter wants is—an answer; and thus the success of an experiment depends not upon the *character*, but upon the *obviousness* of its results. Now the results of the experiments we allude to have been most unequivocal, and accordingly those who performed them ought to be perfectly satisfied."

CURING HAMS.

Mr. Editor—In the last Dec. No. of the Cultivator, page 374, were published certain directions for curing meat, which I consider worth double the subscription price to any person who wishes to cure and preserve meat for family use. The directions there given for curing hams, I have followed out to the very letter, (with the single exception of suspending them with their shanks downwards while smoking,) and the result is, that more delicious ham than I now have I never tasted. I had followed a course of my own, which was almost invariably the same till last year, but the mode recommended by you is so much superior to it, that no slight cause will ever again induce me to be indifferent in regard to the method of curing my hams. I cheerfully bear this testimony to the value of your receipt, knowing that those of your readers who choose to follow it will be amply repaid for the slight sacrifice of time and trouble, consequent upon so doing. A Subscriber.

Hoosick Falls, N. Y., 1845.

At the request of several correspondents, we here republish the receipt for curing hams above alluded to. We have practiced according to this mode for several years and have found it superior to any other with which we have been acquainted.

For every one hundred pounds of meat, take five pints of good molasses, (or five pounds brown sugar,) five ounces saltpetre, and eight pounds rock salt—add three gallons of water, and boil the ingredients over a gentle fire, skimming off the froth or scum as it rises. Continue the boiling till the salt, &c., is dissolved. Have the hams nicely cut and trimmed, packed in casks with the shank end down, as the pickle will thus strike in better. When the pickle prepared as above is sufficiently cool, pour it over the hams. They may lie in pickle from two to six weeks, according to the size of the pieces, or the state of the weather—more time being required in cold than in warm weather. Beef or mutton hams, or tongues intended for smoking and drying, may be cured according to this mode, and will be found excellent.

There are other modes of pickling hams which are much esteemed in various countries. In that excellent and agreeable work entitled "Farming for Ladies," we find the following directions for preparing the celebrated "Hambro' Pickle," which is said to be equally applicable to beef, pork, tongues, &c.—"To each gallon of water, put one pound and a half of common salt, a quarter of a pound of coarse brown sugar, and one ounce of saltpetre; boiled, and to be carefully scummed. After standing in a proper vessel until quite cold, the meat may be immersed, and will be fit for use in ten days, and improve for months; but it must be carefully kept pressed down by means of a cover, and a clean heavy stone. The pickle must be watched, and when any scum begins to rise, the meat must be taken out and the liquor reboiled, and scummed and cooled as before; at the same time half a pound more salt must be added; but no raw salt is to be applied at any time. The meat is to be returned when the pickle is quite cold, say after ten or twelve hours. Tongues will require a month, a month at least, and are improved by the addition of an ounce of bay-salt added to the above. One clove of garlic, half an ounce of allspice, and as much whole pepper, boiled with the ingredients, much improves it."

HEDGES FOR AMERICA.

A great difference of opinion exists in relation to hedges for this country. There have been some very successful attempts, and there have also been many failures. An examination into the *causes* of this difference of success, in actual experiments, will doubtless be of use, and enable us to judge whether hedges possess advantages over other kinds of fence in any case. We lately examined several specimens of successful hedge making. A part of them were made by John Robinson of Palmyra, N. Y., a vigorous and enterprising English farmer, whose experiments are of several years continuance. He has over a hundred rods of hedge in different stages of growth, the management or treatment of which appears to be particularly worthy of attention.

The young thorns are set out in the hedge row at two years of age, after which they are cut off at the surface of the ground the first year, to cause a thick growth of sprouts; they are again cut off the second year, from four to six inches from the ground according to their height and vigor, which causes a second crop of thick sprouts at that height; the third year they are cut off six or eight inches higher, and so on, rising about at that rate, until the hedge is five or six feet high. This mode of treatment, which is well known and often practiced in England, obviates the necessity of *plashing*, if it is successfully performed; the successive crops of thick sprouts thus occasioned, densly interlace each other, and the hedge becomes a thick mass of entangled shoots and branches, which cannot be separated. It is in fact precisely similar to the process of *felting*, but on a larger scale; and when the best specimens thus grown, are forcibly shaken at any point, whole rods on either side, are shaken with it as in one mass. This felting property thus becomes of more value by far, to the impregnability of the hedge, than the thorns.

One hedge had received three different modes of treatment. A part had been imperfectly cultivated; another portion had been well cultivated for a distance of two feet on each side; and a third stood on ground which was trenched two feet deep before planting. The growth of the second was twice as great as the first, and of the trenched portion still greater. Indeed, one may as well think of raising corn by planting a row in a thick meadow, as to raise a good hedge without keeping the soil constantly mellow about the young trees. A space two feet wide on either side of the hedge is the distance usually kept cultivated.

From six to eight years are needed to make a good substantial hedge, proof against cattle.

These hedges were set on a bank about eighteen inches above the surface, with a ditch two feet deep serving to carry off surface water on one side. The plants are set six inches apart. If closer they do not grow so well.

The greatest difficulty, which J. Robinson finds, is protecting the young hedge for several years, until it is proof against cattle. For although it may be placed along the side of a fence, next to crops, or meadow, yet in the course of rotation, it is thrown into pasture, and is thus endangered. A longer course of alternating crops, would be the remedy in usual cases.

Hedges for *plashing*, are not subjected to the successive shortening down which has been just described; but the young stems are suffered to grow until several feet high, and an inch or more in diameter when they are cut partly off near the ground, and bent over to an angle of forty-five degrees in the direction of the line of the hedge. A thick growth of branches is not needed before this operation. All the *large* branches should be cut off at the time, but not closely. Young shoots afterwards ascend, and growing upright, form cross-bars with the main stems which have been bent over, and interlocking with them produce a sort of lattice work possessing ultimately great strength. A small portion of the trees are not bent, but remain upright, to stiffen the rest, and slender poles are run along the top, alternating with them, to keep them to their place, until the whole is firmly established. These poles, being green and of perishable wood, cost little, and rot out when they are no longer needed.

The selection of suitable trees for forming hedges, is of the very first importance. One great reason, without any doubt, why so many have failed in their experiments, is bad selection, or a want of adaptation of certain species, to the climate where they were used. The English hawthorn has been found entirely unsuited to most parts of the United States. At Newburgh, according to A. J. Downing, "its foilage becomes quite brown and unsightly after the first of August." He also remarks that it is there extremely liable to the attacks of the borer. Further south, where the summers are longer and dryer, and consequently more dissimilar to those of England, it is of no value whatever. But in the cooler summers of western New-York, and where perhaps the soil may exert also a favorable influence, it has continued to flourish in *well-managed* hedges for many years. All the hedges of John Robinson, already described, are of this species; a very vigorous hedge, on the grounds of John Baker of Macedon, N. Y., is of the same. We had supposed that moist, rich land would be better suited to this thorn than dry upland; but in the experiments of these intelligent farmers it has been found that good fertile upland is incomparably better.

The sudden failures, however, of this thorn, in some places further south, should induce its cautious use on a large scale, especially while American species have been found in most parts of the country so much superior. The Washington thorn, (*Cratægus cordata*,) is preferred by some, and possesses the advantage of the seeds vegetating freely the first year. But in Pennsylvania and Delaware, where both this and the Newcastle thorn (*C. crus-galli*) have been extensively used for many years, the latter has in all cases been found so decidedly superior in hardiness, vigor and freshness of growth, to the former, as to give it eminently the preference. Indeed, the Newcastle thorn, appears to be the only American species extensively tried, which has, *in all cases whatever*, proved to be entirely free from all disease or defect. It is not improbable, however, that the Washington thorn may succeed finely so far north as northern or western New-York, where the English species is itself so much more successful than elsewhere. Its easy growth from seed, besides, renders it worthy of trial. There are other trees, doubtless, of value for this purpose. The Buckthorn has been found perfectly hardy and successful around Boston; and the poisonous character of its bark secures it from attacks of the mice. Its thorns are only the pointed ends of the branches, which are hardly sufficient to repel all kinds of intruders. Of its treatment by successive heading down, its *felting* quality, and its capability of plashing, we are not informed, as in nearly if not quite all the specimens we have seen, these operations were omitted.

The expense of a *well made* hedge, until it is cattle proof, is about fifty cents per rod. Caleb Kirk, of Delaware, who was thorough and successful in his experiments, gave the following, as the cost of an excellent hedge thirteen years old:

1000 quicks, cost from nursery,..........	$5.00	
Planting, man and boy, each two days, ...	2.50	
Dressing, first year, with plow and hoe,..	1.00	
Expenses first year,..................		$8.50
Dressing for five successive years, plow and hoe,...........................		5.00
7th year, trenching with plow, and throwing up ditch, three days,..............	$3.75	
500 stakes (for uprights,) cutting, and timber,.............................	3.50	
Poles, (horizontal,) and cutting them,....	2.00	
One hand 3 days, at plashing,............	3.00	
		12.25
8th to 13th year inclusive, one day each year trimming and cleaning,...........		4.50
Expense 13 years, sixty rods,..........		$30.25

It may be questioned whether hedges will ever be extensively used where timber or stones are plenty. But as many places are destitute, or likely to become so, experiments to determine their practicability must become very desirable. The disposition to neglect is so prevalent with most farmers, that *the great care and attention, and constant culture*, so necessary, will not be given, and success cannot take place in such cases. But with skilful management and enterprise they will doubtless be found highly profitable; that if good they will prove a great rural embellishment, we all know; and that those who have fruit gardens to protect from rogues, will find them the greatest security, is equally self-evident.

HANGING GATES.

The convenience of a *self-shutting* gate, is such as to need no argument to prove its utility. Various expedients are resorted to, and we see all over the country, chains and ropes with suspended weights to cause gates to shut of their own accord. But all this tackle and rigging is avoided, if the gate is hung to its post with a proper inclination.

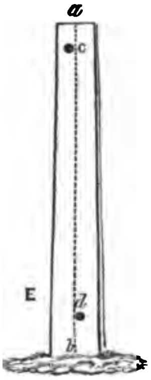


Fig. 98.

The mode of hanging a gate so as to shut by its own weight, is represented in the annexed figures. Fig. 98 shows the post set perpendicularly in the ground. On the face of this post the plumb line *a b* is to be drawn. Then bore the hole for the upper hinge at *c*, one inch to the left of this line, and for the lower hinge one inch to the right. When the gate therefore is hung, the turning point of the upper hinge will be two inches more to the left than the turning point of the lower. This will cause the gate to fall to the left or towards E; but if it is opened wider than a quarter of a circle, it will then begin and fall the other way or wider open. To obviate this, let the upper hook in the post project two inches more than the lower, and the lower eye on the gate project two inches more than the upper eye, as shown in fig. 99; the gate then will fall shut, if not opened more than three quarters of the semi-circle, which is about as wide as is generally needed. The distance between the gate and the post in the figure is represented as greater than in fact, to exhibit the principle more plainly. Reversing the position of the holes, placing the upper one to the right and the lower to the left of the plumb, will of course make the gate fall to the right as circumstances may require.

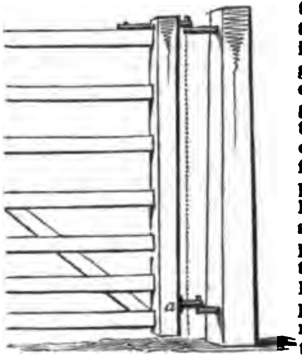


Fig. 99.

Although always desirable that the gate should shut itself, it is often convenient when opened nearly to its extreme limit, that it fall the other way, in order to remain open without fastening. If this limit is little more than a quarter of a circle, it may be hung merely as indicated in fig. 98. If more than three-quarters of the semi-circle, let it be hung as shown by the two figures combined. But, to be applicable to all circumstances, the principle should be known; which is this—suppose the gate is hung so as to swing freely through the whole circle—if the two turning points are in the same perpendicular line, it will of course remain at rest wherever it is placed, and not turn of itself. But if the perpendicular line from the upper falls to a point a short distance from the lower, then a line connecting this point with the lower turning point, will show the direction the gate will remain at rest. A figure, (fig. 100,) will make this plainer; let *a* be the lower turning point, and *b* the upper; then the gate will remain at rest in the direction of the line *d b*, and the highest point of elevation, from which it will fall both ways, will be *e*. But if *e* be the upper turning point, the gate will remain on the line *f*, *c*, and the highest point of elevation will be *g*.

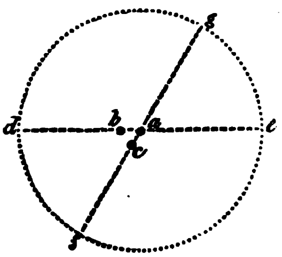


Fig. 100.

The *force* with which the gate will fall shut will be as the distance of the lower turning point from the plumb line; where this distance is small, it will shut slowly; where it is great, it will fall rapidly against the post. By cutting a screw on the part of the lower hinge which enters the gate, the distance from the post may be changed by the nut *a*, fig. 99, and the gate thus raised or lowered at pleasure to avoid the inconvenience of the sinking of the post, or of obstruction from snow.

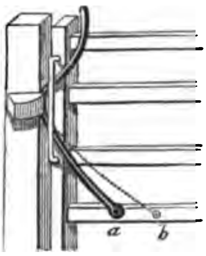


Fig. 101.

Figure 101 represents an excellent and cheap gate latch, made by bending a half-inch rod of iron in the shape indicated, and fastening it by an iron pin on which it moves at *a*. Its weight causes it to fall against the post. If bent in the direction of the dotted line and and moving on a pin at *b*, it will fall more quickly.

If any one should think too much space is occupied by these apparently trifling matters, let him calculate the labor of dragging a single gate over the ground for one year, and fastening it by tying a cord or leather strap round it every time. If passed ten times a day—many are passed five times the number—it would be more than three thousand times a year. To drag open and shut and fasten such a gate, that number of times without stopping, would be hard indeed; and the labor would pay for many gates, hinges, fastenings and all.

AGRICULTURAL EXHIBITIONS.

The spirit which has this year been evinced in regard to the exhibitions of agricultural societies, is highly gratifying. From all parts of the country we are receiving accounts of these exhibitions, and all agree that the interest and zeal manifested, is beyond any former precedent. We regard this as a positive indication of the advance of agricultural improvement—it shows that the people are awaked to its importance, and that a determined action is aroused, the beneficial results of which cannot fail to be experienced.

From this state, we have already received accounts from fifteen county societies, the exhibitions of which were held as follows:—Cayuga co. at Auburn, Oct. 8th and 9th—Herkimer co. at Herkimer, Sept. 25th and 26th —Oswego co. at Oswego, Oct. 00—Chautauque co. at Forestville, Sept. 24th and 25th—Westchester co. at White Plains, Oct. 8th—Erie co. at Buffalo, Oct. 8th—Montgomery co. at Canajoharie, Oct. 8th—Columbia co. at Hudson, Oct. 7th—Onondaga co. at Syracuse, Oct. 8th —Ulster co. at Rosendale, Oct. 7th and 8th—Madison co. at Hamilton, Oct. 1st—Wyoming co. at Perry, Oct. 1st and 2d—Wayne co. at Palmyra, Oct. 1st and 2d—Rensselaer co. at Troy, Oct. 8th and 9th—Greene co. at Cairo, Oct. 00

From Vermont, also, we have accounts from several societies. The Addison county society held its exhibition at Middlebury, Oct. 2—Chittenden co. at Burlington, Sept. 24 and 25—Windsor co. at Newfane, Oct. 1. From Connecticut and Massachusetts we have likewise accounts, which, as well as those from other states, we shall notice as we find room.

We have room in this number for no more than a brief notice of these shows—indeed some of the reports received furnish no more than a mere statement of the awards, without comment or remark.

The show at Syracuse, is spoken of as quite superior to former years—in *sheep* of various kinds, it was deemed not far behind that of the State Society. Premiums were awarded for the best cultivated farms, of which, however, we shall not here speak particularly, as it is our intention to make a personal examination of those farms and others of that fine section, before our next no. goes to press.

The show at Auburn is said to have been better than any previous one. A rule has been adopted that hereafter, cattle, sheep, and hogs, shall only be considered in competition with those of the same breed.

At Hamilton the show was particularly good in dairy products and cattle. From 200 to 300 animals of all kinds were on the ground—all generally superior. The sheep were thought to have been unsurpassed at the State Show. Premiums were awarded for the best cultivated farms—Alanson Annas, of Cazenovia, taking the first, and Rufus S. Ransom, of Fenner, the second. Daniel Gates, of Sullivan, was deemed to have the best cultivated farm in the county, but he has before taken the first premium.

At Poughkeepsie the show was good in all respects. Premiums were here awarded for the best cultivated farm. Mr. Sheafe taking the first—in relation to which an extract from the report of the committee will be found in another part of this paper.

At Buffalo the weather was rainy and uncomfortable, which operated against the exhibition. The show of "blood and grade stock was not so good as the two previous years." Of sheep, the show was superior to former years—there were good specimens of long wooled breeds and others. Excellent cheese was shown from Hamburgh and other parts of the county.

The exhibition of Chautauque county at Forestville, is said to have been on all hands superior to former years. There was a fine display of horses, fine-wooled and long-wooled sheep, butter and cheese, and a long list of miscellaneous and manufactured articles. Altogether, it is said, the show evinced that the farmers of that county are advancing rapidly in improvement.

We notice that several societies, among which we would name that of Barbour county society at Eufaula, Alabama, and Ontario and Saratoga in this state, have awarded volumes of the Cultivator as premiums. The number of volumes which have been thus distributed, is greater this, than in any previous year, and we wish to tender our most respectful acknowledgments, for the confidence which has been in this manner expressed in the usefulness of our work.

Exhibition of the Rensselaer County Agricultural Society.—This exhibition took place at Troy, on the 24th and 25th of September. The weather happened unfavorable the first day—it being rainy in the forenoon, leaving the ground in a damp, unpleasant condition. This probably prevented the show being as full in some departments as it otherwise would have been. Still the show may be said to have been on the whole better than that of last year. The show of fabrics and mechanical productions was good and highly creditable to the manufacturers and citizens of Troy and vicinity. Among the implements we noticed a tool calculated for various purposes—such as cultivating various crops, digging potatoes, &c., &c., which we thought valuable, offered by J. D. Dale, Lansingburgh. A very curious bee-hive, with the bees in it, was offered by E. L. Roberts, Brunswick. It consisted of several apartments which could be opened like a book-case, showing the bees at their work, throughout the whole colony. A model bee-house, with boxes of fine honey, offered by Nathan Howard, Stephentown. We should think the house an admirable one for the safety of the bees, convenience of managing them, &c. Townley's bee-hive, with speciment of honey from it, was also shown. The Horticultural department presented a good display of apples, grapes, and some fine pears and peaches, from the gardens of Messrs. Vail, Van Rensselaer, Kelly, and Buswell. Among the fabrics, we noticed some excellent samples of ginghams, one piece of which was in the loom only two hours before it was exhibited at the show. These were offered by Benjamin Marshall, of the Troy Mills, who also presented a most superior piece of fine shirtings, with the "linen finish,"—much admired by all.

The cattle, with the exception of four or five fine animals from Mr. Vail's herd, were mostly of the common and mixed breeds, and among them were several good milch cows. The working cattle were many of them good in appearance. The display of horses was very good, and there were many very fine ones for the carriage and the road. Of swine we noticed some fine pigs, a cross of the Berkshire, offered by Isaac Tallmadge, Scaghticoke, and some fine Leicester pigs by Elijah Pearl, Troy. Of sheep, we noticed several lots of mixed blood, South Down, Leicester, Cotswold, and common, which appeared to be very good for *mutton*. Also some good fine wooled sheep. Five wethers, Saxon and Merino, crossed, offered by Isaac Tallmadge, were the fattest sheep of that blood we ever saw, and we were told they had only been fattened on grass. A beautiful yearling Merino buck offered by B. H. Streeter, Berlin, purchased at Poughkeepsie last year of J. N. Blakesly. A fine show of geese and ducks was made by Edward Lyons, Troy, embracing Wild and Chinese geese, cross-breed do., and some very handsome Muscovy ducks.

The address, which we regret not being able to hear, was delivered by J. B. Nott, Esq., Guilderland.

Oneida County.—This exhibition took place atRome, on the 9th and 10th of September. From a letter of a correspondent we make the following extracts:—

"It is but justice to the ladies of Oneida to say that their department was admirably represented, and the premiums were distributed so as to afford, we believe, general satisfaction. The exhibition of fruits was very good, and of vegetables, notwithstanding the *dryness* of the season, more were exhibited than formerly. Our show of horses was decidedly good and quite extensive.

"Of cattle we had seven entries less than last year. This was owing partly to the near approach of the State show, but perhaps more to the poor condition in which many cattle are this fall. We have had very little feed since midsummer, and consequently cattle are not in high order.

"The address was delivered by the President of the Society, [E. Comstock, Esq.,] at 3 o'clock, *P. M.*, of Tuesday. On Wednesday morning the plowing match was held. Most of the farmers believed that the ground was too hard to admit of plowing at all, and none but the most resolute and experienced plowmen ventured to enter. There were, however, seven teams in the field, (which number would have been more than doubled had the ground been in good condition,) every one of which did admirable work. Indeed, we have never seen better work done any where. The reports of the committees were announced at 2 o'clock, P. M., on Thursday, during the reading of which the deepest interest was manifested by all present, and the exercises closed without a single occurrence calculated to create unpleasant feelings, or affect injuriously the interests of the society. The receipts were fully sufficient to pay all premiums and expenses. About six hundred dollars were received by the Treasurer, including the amount received from the state."

Monroe County.—Our "Farmers' Jubilee," or annual Fair, was held in the city of Rochester, on the 7th. The day was fine, and the display, as a whole, more spirited, and the attendance more general, than on any occasion of the kind in this county, for several years. There was a superior display of fruits and vegetables—more and finer varieties of apples, in particular, than I recollect ever having seen at any of our Fairs—the State Fairs not excepted. The show of horses was somewhat large, but not very select—there were a few very fine ones, however. Of cattle the display was, perhaps, an improvement upon the show of last year, especially in the improved breeds, though far below what it ought to have been. Our friend Garbut, of Wheatland, had a lot of his beautiful Devons on the ground, some of which took premiums, and your friend Hyatt, the "printer-farmer," was there with his little herd of Herefords and Durhams, seven in number, *all of which took premiums.* Don Quixotte, the Hereford, (2 years old in August,) took the first prize as the best bull over two years old in his class, which embraced Durhams, Herefords, Devons and Ayrshires,; and Emma, Hereford, took the first prize as the best two year old heifer, in the same class. ["Don" and "Emma," you will recollect, both took the first premiums as the best two year olds in their class, at the recent State Fair at Utica.] Albino, another of the seven, received the first prize as the best yearling bull in the same class with the Herefords; he took the first prize last year, at the Poughkeepsie State Fair. There were several very fair Durham bulls, of various ages, present; also a tolerable lot of grade and native cattle; there were also several noble pairs of working oxen, that would not suffer by a comparison with any that were at the recent State Show. Of hogs, there were but a few that might be ranked as good. Of sheep, there were a goodly number, of fine and long wooled, of the Merino, Paular, South Down, Cotswold, &c. Gen. Harman's Paulars were very fine. There was a tolerable display of farming utensils, domestic fabrics, &c. There were several beautiful varieties of dahlias and other flowers, presented by Messrs. Ellwanger & Barry, Mr. King, Mr. James Whitney, &c. The address was delivered by L. B. Langworthy, Esq., Col. Randall, of Cortland, who had been invited, and was expected to perform that duty, having been prevented by sickness in his family. Upon the whole, the Fair went off as well as had been anticipated—and the farmers of Monroe have reason to be encouraged in their labors by seeing the evidences which were there exhibited of the onward progress of agricultural improvement. *Elmwood Cottage, Oct.* 9, 1845.

T. H. H.

Livingston Co.—Extract of a letter from C. H. Bryan, Esq., Geneseo, Oct. 10:—"Our cattle show and fair was decidedly more interesting and more numerously attended than any previous one. There could not have been less than 3,000 persons present."

Saratoga.—The cattle-show was held at Ballston Spa on the 15th ult. and a letter from a getleman present, informs us that it was "decidedly the best one ever held in the county."

Hartford County (Ct.) Agricultural Society.—The exhibition of this society took place at Hartford on the 3d of Oct. From one of the officers, we have received the following sketch:—"We had fine weather, and a splendid show of fine cattle—more good animals, I think, than we ever had before. We had an excellent address, and a *good dinner,* &c. The exhibition of *fruit* was perhaps equal to any show of the kind in the country. Vegetables were likewise superior—domestic manufactures, arts, and *fine* arts also good. Mr. Ellsworth had a gold medal awarded him for his self-acting pump."

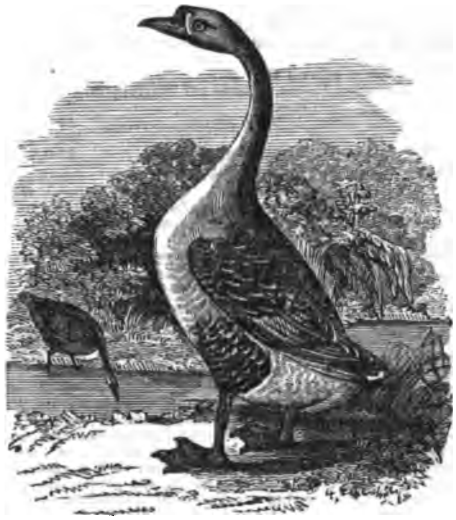
R. I. Horticultural Society.—The first exhibition this Society, was held at Providence, on the 1st of Oct., and "exceeded in variety, quality and excellence, all expectations," the number of samples of fruit alone amounting to 530.

IMPORTATION OF CATTLE INTO MASSACHUSETTS.

The Massachusetts Society for Promoting Agriculture, instead of having a public show this season, appropriated a portion of its funds for the importation of cattle. An agent, Mr. A. Beckett, of Lowell, was sent to England and Scotland for the purpose of procuring the best samples of the Devon and Ayrshire breeds to be found. Mr. Beckett returned to Boston about the first of October, bringing with him, as we learn from the N. E. Farmer, four cows and a bull of the Ayrshire breed, four North Devon cows and a bull, and a calf dropped by one of the Devon cows on the passage. They are spoken of as being very fine, each lot exhibiting the peculiar points and marks which are most prized in their breed. Their cost, original purchase and expenses added, is stated to be about $3000—or $300 each. The Devon cows were purchased of Lord Leicester, of Holkham, Norfolk, and the Devon bull of Mr. Bloomfield, whose stock is well known, and is considered equal to any in England. It was from his herd and Lord Leicester's that Mr. Patterson, of Baltimore, obtained his much admired Devons.

The Ayrshires are spoken of as "perfect in their kind." They were selected from several of the best herds in Scotland.

We have no doubt this stock will be of great value to Massachusetts, and even to other states.



CHINESE GOOSE.—(Fig. 102.)

There are probably several varieties of geese in the "Celestial Empire." We have seen two or three kinds which have been brought to this country. One kind were uniformly of a dusky white color, though in other respects resembling the grey variety, for one of which the above cut was taken. This grey kind are very prolific, hardy, and profitable. We know of none equal to them in these respects. They will rear two broods in a season, and though the last ones do not come out till autumn, and the nights are frosty, they get along and grow through the winter without any trouble—laying and rearing a brood for themselves the next season.

At the Fair at Poughkeepsie in 1844, Messrs. A. & H. Mesier, of Fishkill, exhibited some of these geese, which attracted much attention. We had the pleasure of making a visit to Messrs. Mesiers' farm in August last, and there saw altogether the finest flock of these geese we ever met with. There were three or four broods of goslings which were hatched in May, grown up—apparently as large as the old ones—and the geese which hatched these were all then sitting for a second brood, which were expected out the first of September.

The form of these geese is very handsome—their necks are long, with a graceful curve—their bodies round, and thickly covered with fine feathers. The upper part of the bill rises in a knob—a characteristic of all the Asiatic goose-tribe, so far as we know—and both the bill and legs are black. Their general color is almost as uniform as that of our American wild geese. Their flesh is considered superior.

These geese should not be confounded with the large African variety, called by Cuvier *swan geese,* which are of enormous size, but rather unprolific.

The above cut was taken for a Chinese goose belonging to Mr. C. N. Bement, to whom we are indebted for a loan of the cut.

Dig out peat and muck, and let the frost and rains act on it through the winter.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, October 23, 1845.

COTTON.—The variation from the prices given last month, may be said to be a decline, experienced since the arrival of the steamer of the 19th, of ⅛ to ¼ cent per lb.

BUTTER.—Western, 11a14—Goshen, 18a25.

CHEESE—5½a7.

FLOUR—The advance occasioned by the news per the steamer Great Britain, is stated at 75 cents per bbl. on common qualities, and 50 cents on extra. Michigan and Ohio, $5.31a$5.35—Genesee, $5·44—City Mills, $5.75.

GRAIN—Wheat, $1.19a$1.20.

HEMP—Dew rotted, American, per ton, $90—Sisal, $130.

HOPS—per lb. 15a16 cents.

HAMS—scarce, 8½a9 cts.

BEEF—Mess, $9.

LARD—8a8½—in demand.

PORK—In demand—Ohio $13.87½.

TOBACCO—Kentucky, per lb. 3 cents—Connecticut seed leaf, 8a10.

WOOL—(Boston prices.) Oct. 22:

Prime or Saxony fleeces, washed per lb.......	$0.37a0.40
American full blood fleeces,.................	35a0.37
" three-fourths blood fleeces,.........	33a0.34
" half blood do	31a0.32
" one-fourth blood and common,....	28a0.30

ALBANY, Oct.24.—Sales of flour have been made to-day of Genesee and good western at $5.44a$5·56¼ A load of Genesee wheat was sold at $1·15. Barley sells at 57a59c. for two rowed : a prime lot of two-rowed is in market at 62½c.—no sales four-rowed. Oats, 40a41c. Rye, 72½c. in the streets.

VALUABLE WORKS, BY A. J. DOWNING, Esq.

1. *The Fruits and Fruit Trees of America*, or the Culture, Propagation and Management, in the Garden and Orchard, of Fruit Trees generally; with descriptions of all the finest varieties of Fruit cultivated in this country. 1 thick vol. 12 mo. Fifth edition, with many engravings.—$1·50. Or a superior edition, in large 8 vo., to match the author's other works. $2.50.

"At length we have the gratification of announcing this long expected work, and from a perusal of it, we can say, that nothing compared with it on the subject of Pomology has yet been published in the United States. This work will unquestionably now become the standard pomological work of this country; for the great care bestowed on the different kinds, arranging and connecting numberless synonyms, and giving accurate outlines and descriptions, will make it a safe guide."—*American Agriculturist.*

2. *A Treatise on Landscape Gardening*; adapted to North America, with a view to the improvement of Country Residences. Comprising historical notices, and general principles of the art; directions for laying out grounds, and arranging plantations; description and cultivation of hardy trees; decorative accompaniments to the house and grounds; formation of pieces of artificial water, flower-gardens, etc.; with remarks on Rural Architecture. New edition, with large additions and improvements, and many new and beautiful illustrations. 1 large vol. 8 vo. $3.50.

This volume, the first American Treatise on this subject, will at once take the rank of THE standard work."—*Silliman's Journal.*

"Downing's Landscape Gardening is a masterly work of the kind —more especially considering that the art is yet in its infancy in America"—*Loudon's Gardner's Magazine.*

3. *Designs for Cottage Residences*, adapted to North America, including Elevations and Plans of the Buildings, and Designs for Laying out Grounds. By A. J. Downing, Esq. 1 vol. 8 vo., with very neat illustrations. Second edition, revised $2.00.

A second edition of "Cottage Residences" is just published as Part 1; and it is announced by the author that Part II., which is in preparation, will contain hints and designs for the *interiors* and furniture of cottages, as well as additional designs for farm buildings.

4. *Gardening for Ladies*; and Companion to the Flower-Garden. Being an alphabetical arrangement of all the ornamental plants usually grown in Gardens and shrubberies; with full directions for their culture. By Mrs. Loudon. First American, from the second London edition. Revised and edited by A. J. Downing, Esq. 1 thick vol 12 mo., with engravings representing the processes of grafting, budding, layering, &c , &c. $1.25

"This is a full and complete manual of instruction upon the subject of which it treats. Being intended for those who have little or no previous knowledge of gardening, it presents, in a very precise and detailed manner, all that is necessary to be known upon it, and cannot fail to awaken a more general taste for these healthful and pleasant pursuits among the ladies of our country"—*N. Y. Tribune.*

Published and for sale by WILEY & PUTNAM,
Nov. 1—3t. 161 Broadway, N. Y.

ILLINOIS FARMS FOR SALE.

THE subscriber offers for sale a splendid farm of over 1000 acres, in La Salle county, within five miles of Peru, the termination of the Illinois and Michigan canal, oak openings, rich deep soil, beautifully situated on a Plateau, watered by the Little Vermillion and the Tomhawk, ecxellently adapted for a sheep farm. There are about 2000 sheep at present on the farm, with fences, &c., suitable, and a field sown with cultivated grasses—about 200 acres under cultivation.

Also other farms in the vicinity of Chicago and the canal, one on Rock river, and one in Wisconsin A. BRAND.
Chicago, Oct., 1845.—1t*

COTSWOLD SHEEP FOR SALE.

THE subscriber being desirous of retaining upon his farm only the South Down sheep, offers for sale his flock of Cotswolds, consisting of 6 rams—one 4 years old, one 3 years old, one 2 years old, two yearlings and one lamb; the two former having taken the first prizes at the State Fair and at the Fair of the American Institute. Also twenty ewes—three being lambs—the remainder from one year to four years old. The rams and fifteen of the ewes are all bred from sheep imported by Messrs. Corning and Sotham, and five ewes from the flock of Mr. Thos. Dunn.

Albany, Oct. 22, 1845. J. M'D. M'INTYRE.

GARDENER WANTED.

A YOUNG MAN of good character, who understands his business thoroughly, may hear of a pleasant and permanent situation, on application to the Editor of the Cultivator. Oct. 15—1t*

CENTRE DRAFT PLOWS.

D. PROUTY & Co., Nos. 19, 20, & 22, North Market-st. Boston. manufacture and keep for sale, a large assortment of the most improved Implements of Agriculture, including their celebrated CENTRE DRAFT PLOWS, Cultivators, Harrows, Straw-Cutters, Seed Sowers, Vegetable Cutters, Corn-Mills, Ox-Yokes, &c. &c. For the character of their plows, they have only to refer to those who have used them. The demand for them for a few years past, has been great—they having been sold extensively over the country from Maine to Louisiana, and the western States, as well as in the British Provinces; and have not failed to satisfy all purchasers of their great superiority in the qualities of neatness of workmanship, strength, durability, ease of draft, and complete execution of the work.

The above articles are for sale at the ALBANY AGRICULTURAL WAREHOUSE, No. 23 Dean-street, at the Manufacturer's prices.

FARM FOR SALE.

THE subscriber offers for sale the farm upon which he now resides, situate in the village of Auburn, in the county o Cayuga, and containing 100½ acres.

This farm lies upon the south side of the western turnpike, (now Genesee-st., Auburn,) and is well known as having been the residence of Hon. Nathaniel Garrow, deceased, for many years.

The buildings, fences and other erections thereon, are ample and in good repair; the soil will vie with that of any other farm in Western New-York, for fertility, variety and earliness of vegetation. Great attention has been paid ae well by the former as also by the present owner, to the selection and cultivation of choice fruit, and there is now upon the farm, in full bearing, a great abundance of the best varieties of apples, pears, cherries, peaches, grapes, &c. &c. The farm is well watered, durable springs, which give a never failing and ample supply.

The location is believed to be as desirable as that of any other arm in the state, as well for farming purposes as also for the residence of the gentleman or a man of business, being withing a few minutes walk from the Rail Road Depot, and within a few rods of the Female Seminary.

A credit will be given, if desired, for a large portion of the purchase money, for a term of years upon payment of interest annually. Inquiries may be made of the subscriber upon the premises, of LUTHER TUCKER, Esq., Editor Cultivator, Albany, or of DAVID WRIGHT, Esq, Auburn. JOHN REMER.
Auburn, N. Y., July 14, 1845.—3t.

NEW AND IMPROVED POUDRETTE,

MADE by the Lodi Manufacturing Co., may be had by application at the office of the Company, No. 51 Liberty-street, New-York, or by addressing a letter (post paid) with directions how to ship, &c., to "The Lodi Manufacturing Co., New-York." The price for it, delivered anywhere in New-York city, free of cartage, &c., is as follows: For one barrel, $2.00; for two bbls., $3.50; for three barrels, $5.00; four barrels, $6.68; five barrels, $8.00; six barrels, $9.75; and for any quantity over six barrels, $1.50 per barrel. Pamphlets and instructions for its use, may be obtained gratis at our office.

The Lodi Manufacturing Co., defy competition in the art of making a *cheap*, *powerful*, and *lasting* manure, and strenuously invite a fair trial between *an equal cost* of their poudrette, and an equal cost of the best guano in existence.

It is hoped that the successful trial of poudrette upon wheat, on Long Island, the last season, will encourage many others in other parts of the country, to make a trial of its effects this season. Quantity per acre for wheat is 10 barrels, or 40 bushels, sown broadcas with the seed, and harrowed in.

Sept. 1—2t.

RENSSELAER INSTITUTE.

A PRACTICAL, SCIENTIFIC, AND MATHEMATICAL SCHOOL.

THE winter term of this institution will commence on Wednesday, the 5th of November next. The course of studies pursued is still the same with that pursued when under the charge of Prof. Eaton, with the addition of Theoretical Mathematics.

The following is a brief view of the branches pursued in the Institute.

1. Theoretic Mathematics.
2. Practical Mathematics with special application to Surveying, Navigation, and Civil Engineering.
3. Natural Philosophy, including Mechanics, Hydrostatics, Hydraulics, Pneumatics, Optics, Electricity, and Magnetism, with their applications.
4. Chemistry, exerimental and practical. This science will be taught and illustrated with particular reference to Agriculture and the Arts.
5. Natural History, including Botany, Geology, Mineralogy and Zoology.
6. Occasional lectures will be given on subjects pertaining to Taste, Morals, and the Christian Religion.

Besides the courses of lectures by the Faculty, each student is required to give lectures on the branch of science which he is pursuing, illustrating his subjects—in Mathematics and Natural Philosophy by surveys, measurements, observations, or experiments of his own—in Chemistry with experiments performed with his own hands—and in Natural History, as far as possible, by specimens of his own collection; and he thus acquires theoretic and practical knowledge, as he is explaining it to others. In this method of instruction it is hardly possible for a person to pass through the appointed lectures, illustrations and experiments, without attaining an intimate and familiar acquaintance with the studies prescribed. The learner becomes himself the teacher, and he must first learn in order thus to explain his subject to others.

Rev. N. S. S. BEEMAN, D. D., Prest.
WM. P. VAN RENSSELAER, } V. Pres'ts.
Hon. DAVID BUEL, }
GEORGE H. COOK, } Professors.
JOHN WRIGHT, M. D., }

The price for tuition will be $15 per term—two terms in the year—one commencing on the first Wednesday in November, and continuing 20 weeks, and the other commencing on the first Wednesday in May, and continuing 22 weeks. Those who perform a course of experiments with their own hands, are charged $8 extra for chemical substances and apparatus, unavoidably destroyed.

Board can be had from $2 to $2.75 per week.

Oct. 1, 1845—2t.

FRUIT TREES.

THE subscribers are now ready to receive orders for *superior Fruit Trees*, viz: APPLES, PLUMS, PEARS, CHERRIES, PEACHES, Quinces, &c., &c., from *their new and extensive nursery*, Their assortment, which they offer for sale the coming fall, is very large and fine. The trees are handsome, thrifty, and of the most suitable size and age for transplanting, and being propagated by the proprietors themselves with the most scrupulous care, either from bearing trees in their own grounds, or from others of undoubted genuineness, and being in every other respect until they are sent from the nursery, under their *immediate personal supervision*, they can be confidently recommended.

It is expected that all orders coming from persons unknown to the proprietors, will be accompanied by a remittance, or that some responsible reference will be given. Orders are entered on the order book, to be forwarded as soon as practicable in the fall. Orders respectfully solicitied, and will receive prompt attention.

WILSON, THORBURN & TELLER, or
WM. THORBURN, Seedsman, 38 Broadway,

Albany, *Sept*. 1—3t.

☞ A liberal discount made to those who purchase to sell again, or by wholesale.

PRINCE'S LINNÆAN GARDEN AND NURSERIES,

Flushing, L. I., near New-York.

THE GREAT-ORIGINAL ESTABLISHMENT.

THESE Nurseries are not only the largest in the Union, covering near 60 acres, but the collection of Fruit and Ornamental Trees, and Plants, is the *most extensive and select* in America, being the result of investigation during a century. The specimen grounds comprising 1700 trees from which the Nurseries are ingrafted, thereby ensuring their accuracy. The collection contains more than 500 *new and rare varieties* of fruits, and above 1000 rare varieties of flowering shrubs, and roses, that are in no other nursery. The new descriptive Catalogues, with reduced prices, and directions for culture, will be sent to every post-paid applicant, and all orders will be executed with that accuracy and dispatch which characterize the establishment. The public are cautioned against a spurious use of our name and title, by an Attorney at Law, named Winter.

Oct. 1—1t. WM. R. PRINCE & Co.

SEEDLING APPLE-TREES FOR SALE,

BY J. J. THOMAS, at his Nursery, Macedon, Wayne Co, N. Y., one year old, and from 5 to 10 inches high, at $3 per thousand No charge made for packing, for orders of 5000 each; or 50 cts. per 1000 for less. Orders to be post-paid and accompanied with remittances.

Oct 1—1t.

BOOKS FOR SALE.

AMERICAN Farmer's Encyclopedia, price $4—Skinner's Cattle Doctor, price 50 cents, and a variety of other works, for sale at the office of "The Cultivator."

FAN MILL AND CRADLE MANUFACTORY.

THE subscribers continue to manufacture Fan Mills and Grain Cradles of the very best quality. The subscribers have recently improved their Fan Mills, so that wheat and all other kinds of grain and seeds are thoroughly cleaned by being run through the mill once. Said improvement has been secured by letters patent, bearing date the 10th day of July, 1845.

Notwithstanding the labor and expense which we have bestowed upon the improvement of our Fan-Mills, we are enabled to furnish the "Patent Fan-Mills" at the same prices which we have received for mills heretofore manufactured by us.

We manufacture four different sizes of Fan-Mills, seven sieves to each mill. Prices from $21 to $27. according to size.

Orders from abroad promptly filled, and a liberal discount to dealers.

I. T. GRANT,
D. H. VIALL.

Schaghticoke, Junction P. O., Rensselaer Co., N. Y.

We the subscribers certify that we have witnessed the operation of I. T. Grant & Co.'s "Patent Fan-Mill," upon wheat and all kinds of grain and seeds, and have no hesitation in pronouncing it superior to any mill now in use. The operation of cleaning wheat is performed with one-half the time and labor required by other mills, as it chaffs and screens at the same time. All kinds of grain and seeds are thoroughly cleaned by being run through the mill once. We cheerfully recommend, and advise all farmers who wish to purchase a fan-mill, to purchase the "Patent Fan-Mill" manufactured by I. T. Grant & Co.

John M. Mott,
L. D. Eddy,
Cha's J. Wilber,
James H Rice,
Moses Buckley,
P. G Williman,
Calvin Morse,
James H. Jones,

H. K. Duer,
John Case,
Henry P. Stuntz,
Philip H. Stuntz,
Edwin Smith,
James G. Gordon,
George W. Corry,
Francis Crocker,

I know little of the utility of the fan-mill above described except from information. I am, however, personally acquainted with almost every one of the above subscribers, and have no hesitation in saying that the most implicit confidence may be reposed in all they certify.

JOB PIERSON.

I am intimately acquainted with the Hon. Job Pierson, who has signed the above certificate. He is a highly respectable man, (formerly member of Congress,) and I have great confidence in him.

W. L. MARCY.

For sale at WARREN'S, in Troy, D. L. CLAWSON'S, No, 192 Water-street, New-York, and at COMSTOCK & Co.'s Agricultural Warehouse, Albany. Sept. 1—3t.

WILLIAM HOVEY'S PATENT STRAW CUTTER.

THE subscriber having made some important improvements in his tools and machinery for building his celebrated Straw Cutter, is now able to offer them at the following reduced prices:—

No. 1, $10, former price $12.
No. 2, $12, " " $15.
No. 3, $15, " " $20.
No. 4, $20, " " $25.
No. 5, $25, " " $30.
No. 6, $30, " " $35.

A liberal discount will be made to dealers. The great advantage that these machines have over all other Cylinder Cutters, consists principally in the ease and facility with which the knives can be adjusted, for which he holds letters patent. Any one knife may be taken off and ground without taking off the whole number; and should any one knife become narrow by grinding, the edge can be set out by set screws, so as to come in equal contact with the hide roller, without the necessity of grinding all the other knives down to the same width. The wings to which the knives are fastened are of vast importance, as they serve to strengthen and support the knives, and prevent them bending while cutting cornstalks or other coarse fodder.

Machines will probably be offered by others in the market, made to resemble these Cutters, but entirely without the above named improvements. The knives are fastened on a cylinder without wings to support them, and are confined by rings on each end. No one knife can be taken off without the whole number—and in case of inequality in the width of knives, the machinery becomes useless unless they are all ground equal, as there are no means of setting out the edges to make them cylindrical, and it will be extremely difficult to grind them so perfect that they will all come witth equal contact on the roller on which they are designed to cut. Should such an imperfect article be wanted on account of cheapness, the subscriber will furnish a better one at a cheaper rate.

CAUTION.—Any person who shall make, use, or sell to others to be used, any of the above improved Cutters, will be held accountable for the infringement of the above named patent.

Worcester, Mass., August, 1845. WILLIAM HOVEY.

N. B. Ruggles, Nourse & Mason, having ceased to act as my agents, a full assortment will be kept for sale at the Farm Implement and Seed Warehouse of D. PROUTY & CO, Nos. 19, 20, and 22 North Market-street, and 19 Clinton-street, Boston. They are also for sale at COMSTOCK & Co.'s Agricultural Warehouse, Albany. Sept. 1—3t.

FINE WOOLED BUCKS FOR SALE.

SEVERAL Bucks, of various ages, and of the best quality, both for fineness and weight of fleece, as well as for shape and constitution, can be had if applied for soon. A part of them are *pure* Merino, and a part a cross of the Merino and Saxon. Address, *post-paid*,

SANFORD HOWARD,
Office of the Cultivator.

Albany, Oct. 1.

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☞ **ADVERTISEMENTS inserted in the Cultivator, at $1,00 per 100 words for each insertion.**

ONION SEED.—1000 lbs. of Blood Red Onion Seed.
150 " Pure White " "
500 " Yellow " "
all the growth of the present season and raised from selected roots.
For sale at the Seed Store of the Hartford Co. Ag. So., by
Hartford, Ct., Oct. 10, 1845.—3t E. W. BULL, Seedsman.

GARDEN SEEDS.

THE subscriber (who has been for years the most extensive practical seedsman in America,) would inform dealers in seeds, that his crops are now nearly all harvested, and that orders can be speedily executed. The application of horse power to threshing and cleaning, (heretofore more expensively performed by hand,) has enabled him to reduce prices below those of former years; and as the seeds sold by the subscriber, are, (with slight exception,) the produce of grounds cultivated under his strict personal inspection, his customers have a guaranty which cannot be given with imported seeds, or such as are casually purchased, and vended in ignorance of their worth, *neither texture nor complexion being an index of their age or quality.* D. LANDRETH, Philadelphia.
Nov. 1—1t.

D. LANDRETH & FULTON, Proprietors of the old and widely known Nursery and Gardens of the late D. & C. Landreth, near Philadelphia, offer for sale a select, well grown stock of most articles in their line—embracing Fruit Trees of choice kinds, deciduous and evergreen Ornamental Trees, Flowering Shrubs of rare varieties, and Green House Plants, including two thousand finely formed, and many thousand small plants of the Camellia. To preserve the character of this establishment, as it existed under the old proprietors, has been the aim of their successors, and they trust successfully so.

On hand 50,000 Maclura, or Osage Orange, better adapted for Hedges than the thorn, either native or exotic. It is perfectly hardy, (farther north than at Philadelphia,) grows with rapidity and is free from disease, and the attack of insects. On good land and with proper culture, it will form a hedge impenetrable to man or beast, in five years.

Printed Catalogues, on application.
Nov 1—1 t.

ALBANY AGRICULTURAL WAREHOUSE.

No. 23 Dean-street.

THE subscribers have taken the large store, No. 23 Dean-street, Albany, where they have opened an Agricultural Warehouse, for the sale of all such Machines, Implements, Tools, and Seeds, as are required by Farmers and Gardeners. It is their intention to be prepared at an early day to supply every article for which there shall be a demand, and they beg to assure the public that no effort will be spared to procure the best quality of articles, and to manage the business, so far as possible, to the satisfaction of those who may deal with them.

PLOWS.—They have been appointed the Agents of the manufacturers of the celebrated *Centre Draft*, *Worcester*, and *Diamond* Plows, and will keep constantly on hand an assortment of the different sizes of these different kinds, together with the Subsoil Plows, of Ruggles, Nourse & Mason, and Prouty & Co. Also Barnaby & Mooer's Side-Hill Plows, and Wiard's Gang Plows.

STRAW CUTTERS.—The different sizes of Hovey's and Stevens', at prices from $10 to $25.

HORSE POWERS AND THRESHING MACHINES.—Having been appointed agents for the sale of Warren's Improved Horse-power and Threshers, orders will be received for them, and the machines shipped from New-York at the manufacturer's prices. They are also agents for Burrall's Power and Thresher, made at Geneva. Arrangements will be made as soon as possible to supply all the best kinds of Horse-powers manufactured in different parts of the country.

They will keep on hand at all times,

Corn Shellers, Fanning Mills,
Shovels, Spades,
Hay and Manure Forks.
Hay Knives, Hoes, Scoop Shovels,
Bull Rings, Tie-up-Chains,
Churns and Cheese Presses,

Root Cutters, Cultivators,
Road scrapers, Wheel barrows,
Cheese Hoops and Tubs,
Measures of all sizes,
Spinning Wheels, Reels,
Pails, Butter Ladles, &c., &c.

FIELD SEEDS.—They will be prepared to supply orders for all kinds of Field Seeds—such as the best varieties of

Spring and Winter Wheat,
Rye, Oats, and Barley,
Peas and Beans,

Clover and Grass Seeds,
Turneps, Ruta Bagas,
Beets and Carrots,

Potatoes of different kinds.

GARDEN SEEDS.—A complete and general assortment from the best growers at home and abroad.

IMPROVED STOCK.—Orders will be received for the different breeds of Improved Cattle, Sheep, Swine, Poultry, &c., and the selections made by a gentleman of extensive practical knowledge in these matters.

The business will be conducted under the firm of E. Comstock & Co, to whom all orders should be addressed.

LUTHER TUCKER,
Albany. Oct. 20, 1845. ELON COMSTOCK.

NURSERY AT MACEDON.

THE subscriber, besides his half of the stock, grounds, &c., of the former nursery of Thomas & Smith, having made large additions, has already, of moderate size, a fine assortment of cherry, peach, apricot, nectarine, and some other trees, for sale at moderate prices.

No trees are ever sold by him, but those propagated from *bearing trees*, whose *excellent qualities* and *fitness for the climate* have been THOROUGHLY PROVED, and in nearly all cases by many years experience.

His collection of bearing trees, in connection with the fine and extensive assortment of David Thomas, of Cayuga county, consists of several hundred varieties in a bearing state, from which the very best only are selected.

Orders promptly supplied, and trees, well packed, sent by canal or railroad. If deficiencies in supplying parts of orders occur, the balance of remittances is returned at once to the purchaser.

Address, J. J. THOMAS.
Nov. 1—1t. Macedon, Wayne Co., N. Y.

CAUTION.

THE undersigned has been duly informed that in consequence *of the principle of the* "Warren Patent Horse Fower and Thresher" being now so universally conceded superior to all others, there are persons in various places who are taking or about to take the risk of manufacturing an article to imitate them Now this is to give notice *that the genuine and latest* "Warren Improved Patent Horse Power and Thresher" *can only be obtained of the subscriber*, or of his agents, E. Comstock & Co., at the *Albany Agricultural Warehouse*, and whosoever else presumes to make and sell them, incurs the liability of legal proceedings.

The undersigned wishes it distinctly understood that the *genuine machines must not be held responsible for the probable failures of the imitation article.* J. PLANT, 5 Burling Slip, N. Y. city,

Successors to L. Bostwick & Co., and exclusive agent for the above machines. Nov. 1.

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New-York, Nov 1.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES.

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Foreign Correspondence.

MR. NORTON'S LETTERS—No. XVIII.

Prof. Johnston's Lectures on the Introduction of the study of Agriculture into Schools.

Laboratory of Ag. Chem. Association,
Edinburgh, Sept. 10, 1845.

L. Tucker, Esq.—A year ago, in a letter dated the 24th of this month, I mentioned that Prof. Johnston had just delivered two lectures to the parochial schoolmasters of Scotland, at their annual meeting, upon the introduction of Agricultural Chemistry into the Parish schools.

Those lectures, as I then mentioned, were received with much approbation, and their permanent effect has been shown by the adoption of this branch of instruction into about 90 schools. This year, the schoolmasters invited Prof. Johnston again to appear before them and give more fully his ideas, as to the kind, extent, and manner, of instruction necessary. In accordance with this request, he on Thursday the 18th, delivered the first of three Lectures, to about 250 of the teachers.

In the commencement, he asked, why is it important that the schoolmaster should teach this branch of knowledge? Because it has become of acknowledged importance that it should be diffused, and because the only way in which this diffusion can be made lasting and universal, is through the rising generation.

"But," he continued, "let it not be understood that it is *chemistry* we want taught; it is only chemistry so far as it is applied directly to Agriculture. More than this would only overload the mind and injure the cause it was intended to serve. To the same end would tend the endeavors of the great mass of teachers to make themselves analytical chemists. They might get far enough to make imperfect researches, and therefore draw incorrect conclusions, but more they could not do without entirely neglecting their other pursuits and duties.

"All that is necessary for the primary schools, is the Catechism. This little work contains the great outlines and divisions of the science, and it imparts a knowledge of those few scientific words and important substances, which the cultivator of the soil must acquaint himself with."

In order to show more fully the plan of this little work, and to exhibit to those unskilled in such matters the methods of performing the experiments therein mentioned, the Professor here took it up, and proceeded through, explaining every point upon which darkness might rest, and performing all of the experiments. These are very simple, but the sight of their performance would enable those who are unaccustomed to chemical manipulation, to perform them much more easily and satisfactorily.

This exposition of the Catechism, occupied three days, and was delivered to deeply attentive and interested auditors. At the conclusion, every doubt seemed to have disappeared from the minds of all present, as to the simplicity and beauty of the great outlines of the science, which had been laid before them. Though in themselves the result of years of labor, guided by the highest scientific intellect, they are given in such a form that any boy of ordinary capacity may understand them. I have lately been in several schools where boys of 12 and 14, not only understood, but applied these principles to such farms as fell under their observation.

Many have acknowledged that much benefit might result from this instruction, but at the same time contended, that it would be more than balanced by the injury done to other studies. This objection is, I think, completely answered by the fact that Prof. Johnston, from the results of actual experience, now recommends that only half an hour a week, be devoted to this branch, and even that only during the last year at school. Of course, each teacher may if he chooses, still farther impress the boys by an occasional Saturday afternoon's walk, over some neighboring farm, making such observations as the state of the land and mode of culture suggest.

At the conclusion of the lectures, Mr. Milne, deputy advocate of Scotland, made a most admirable and eloquent speech, upon the progress of agricultural education, a cause in which he is deeply interested, and which he has most powerfully contributed to forward. He expressed his great gratification at the spirit which prevailed, and the movement which was commencing, among the Scottish schoolmasters; and sketched in graphic language, the improved condition of all classes of the community, when the best system of cultivation should be everywhere adopted. Not only an additional population would be maintained by the increased supply of food, but would be maintained in a greater degree of comfort through the increased demand for laborers.

Prof. Pillans, of Edinburgh University, in seconding a vote of thanks to Prof. Johnston, bestowed upon him a tribute of cordial and well merited praise. He avowed that he had come to these lectures prejudiced against the cause they were intended to advance, but confessed himself to have become an entire convert. "So clear had the whole subject been made, so completely had doctrines founded upon the most abstruse principles of science been simplified, that he could not refrain from expressing his delight. The lecturer, with a scientific mind of the highest order, delighting to grapple with the most difficult problems of nature, had not been for one moment tempted from his object of giving simple instruction. He hoped and believed, that the Scottish schoolmasters, urged by every consideration, would lend their energies seriously to this new task, and maintain that high character which they had always borne."

That the effect of these lectures will be lasting I can not doubt; the whole body seemed quite unanimous in expressions of approbation.

We were mentioned by Mr. Milne as rivals in the introduction of this new branch of education, and I trust that we shall prove formidable rivals, that our rising generation will take the field so armed with the true principles of cultivation that in 20 years from this time we shall no longer need to look to Scotland as a model. The Scotch would call this American conceit, but they don't know what we can do when we are in earnest.

Very truly yours, JOHN PITKIN NORTON.

ON ARTIFICAL MANURES.

BY PROF. JUSTUS LIEBIG.

[Our friend and correspondent at Giessen, Prof. Horsford, has sent us the following copy of a communication, written by Dr. JUSTUS LIEBIG for the first No. of the "Agricultural Magazine," a work recently commenced in London, and for which the copy-right was secured in England.]

SIR—Twenty-five years ago, when the manufacture of spa and mineral waters began, they met with violent opposition from the members of the faculty, as being deprived of all the good qualities of the natural ones—as wanting in a certain *conditio sine qua non*—in a *spiritus rector*, or vital power, which alone gave them any medicinal qualities. Those times have passed now—Chemistry has demonstrated to a certainty what the constituents of those various waters are, and under what forms and compounds they are united in them. It has succeeded in combining them exactly in the same proportions, and in rendering them not only equal to the natural ones, but even more effective. Only from that time physicians were induced to connect certain effects on the human body with certain elements in the waters, and were enabled, by the light of science, to add more of this element, or more of that; nay, to apply, instead of the waters themselves, the one active element alone, as is, for instance, the case with Iodine in indurations and struma. It is well known, that at this moment there are extensive manufactures of mineral waters in England, in Berlin, in Dresden, in Vienna, &c.

Now, I believe, sir, that the same principle may be applied, partially, at least, to the use of manufactured manures, which, in England, has just been called into existence. Guano, that powerful manure, the efficacy of which, in a judicious application, has been clearly demonstrated by the testimony of the most intelligent farmers, cannot be supplied for a much longer period to come. The rich stores in Chili and Africa must be shortly exhausted. As it is only in very dry countries that it is found, we cannot expect to discover many more places containing it, and what are we *then* to do? My attention has often been directed to the question, whether, according to our experience, and the present state of science, a manure might not be composed which could replace the genuine Guano in its effects, and whether I could not, by a series of experiments point out a way of preparing one equal to it in all its chemical and physical properties? You are well aware, sir, that we know with certainty all the elements of the guano, as well as of the urine and solid fæces of men and animals. In like manner it seems to have verified the opinion which I have laid down in my work on Agriculture, that the salts manufactured in the laboratory have the same effect on the growth of the plants, if they are embodied to the fields, in the same forms in which the animals furnish them in their excrements. This must be evident to every one who knows, that to produce these compounds in the laboratory, the same agencies and means are made use of which are employed by nature. The fabrication of a manure, equal in its composition and effects to the solid and fluid excrements of animals and men, seems to me one of the most essential demands of our time—more especially for a country like England in which from various circumstances, a rational agriculture without a supply of manure in some shape or other, *from without*, seems nearly impossible. Our reasoning will appear the more correct, if we remember how different are the results which have been obtained by the numerous analyses of the different sorts of guano—how little the farmer can depend upon producing from a given *quantity* a certain *effect*, as the latter naturally varies according to the composition of the former. There are scarcely any two samples in the market with the same composition—nay, not even similar. The following may be regarded as the essential constituents of a powerful manure applicable to all sorts of soils:—

Earthy Phosphates.—The most important of these is *Phosphate of Lime*, which occurs in nature as a mineral called *apatite*. It is the principal element in the bones, which, it may be observed, have been found most efficacious if calcined, consequently deprived of their animal matter. The rapidity of the effects of phoshate of lime on the growth of plants depends upon its greater or lesser solubility. Its amount of glue (gelatine) diminishes this solubility if the soil is rich in vegetable matters, which furnish carbonic acid by their decomposition, and which acid is required for rendering the phosphate of lime soluble in water and introducing it into the organism of the plants. In the calcined state the bones act sufficiently quickly; but in those soils in which this cause of solubility is wanting, their action is slower. In my work I had recommended the addition of a certain quantity of sulphuric acid, both in order to render the bones more soluble and to change the neutral phosphate of the bones into gypsum, and into a phosphate which contains more acid (superphosphate of lime.) I have been informed that this advice has been most extensively adopted, that the superphosphate of lime has been found to be a most efficacious manure, and that it forms already a most important article of commerce. A second earthy phosphate, not less important, is the *Phosphate of Magnesia*, which it is well known enters in a still larger proportion than the *phosphate of lime* into the composition of the grain.

The *Alkaline Phosphates*, although not originally found in nature, are important elements of the seeds of grain, of peas, beans, &c. A rational farmer must provide them in sufficient quantities to those plants which require them for their development, from knowing that human excrements increase the produce in grain in a far greater proportion because they *contain* alkaline phosphates, than the animal excrements, in which they *do not exist*.

The *Alkalies* (potash and soda) must be constituents of every rationally composed manure, because by them the original fertile condition of the fields is preserved. A soil which contains the *alkalies* in too small a quantity, is perhaps, fertile for grain; but is not necessarily so for turneps or potatoes, which require a great quantity of alkali. By supplying an alkaline manure, fallows, or the cultivation of those plants which are grown during the time of fallowing, becomes less necessary.

Sulphate of Potash is a constituent of all plants, although in small quantity, as well as *common salt* and *chloride of Potassium* which are found in milk in rather a large proportion. The *salts of lime*, especially *gypsum*, are important nourishment for the leguminous plants. *Silica* is never wanting in all sorts of soils—it is a constituent of all rocks, by the decomposition of which all productive soils are formed, and the cerealia find it every where in sufficient quantity, and in a form capable of being taken up by the plants, *if the alkalies are provided* wherever they are present in too small quantity.

Salts of Ammonia.—It can be regarded as certain, that the azote of the plants is derived, either from the ammonia of the atmosphere, or from the manure which is provided in the shape of animal fluid and solid excrements, and that azotic compounds exercise an effect on the growth of plants, only in so far as they give up their azote in the form of ammonia during their decomposition and decay. We may, therefore, profitably replace all the azotic substances with compounds of ammonia.

Decaying vegetable matters, which contain carbon, are useful to the fields in so far as they provide a source of carbonic acid; but they are not quite indispensable in manure, if the latter be rationally combined, as the atmospheric air is an inexhaustible source of carbonic acid from which the plants draw their carbon, if in the manure, the mineral substances are provided which are necessary for the assimilation of the carbonic acid. These are the substances which *together* give fertility to the soil; but although each of them may, under certain circumstances, (*viz.*, where the soil is defective in it, or where it is not indifferent to the plant to take up one instead of the other, as, for instance, may be the case with soda instead of potash,) increase the fertility, no *one* of them can be regarded as manure, according to the common meaning of the word, for the simple reason, that only *all of them in certain proportions*, will fulfil the purpose for which the common manure is applied. This purpose is the restoration, or an increase of the original fertility, and by manure we must replace all the elements of the plants which have been taken away in harvest, or which are contained in the plants which we are desirous to cultivate.

What, then, are the constituent elements of the soil which we remove by the straw, seeds, tuberculous roots, stalks, &c., of our plants of culture? It is obvious that we must know these first, in order to *restore* them in sufficient quantities. To this we answer, by giving the analysis of the ashes of plants and their seeds. Hundred weights of the ashes of the following plants contain

	Straw of			Ashes of	
	Beans.	Peas.	Potatoes.	Clover.	Hay.
Alkaline Carbonates,......	29.38	12.43	4.34	31.63	3.0
Carbonate of Lime,........	39.50	47.81	43.68	41.61	6.9
Phosphate of Lime,........	6.43	5.15	5.73	11.80	40.8
Phosphate of Magnesia,....	6.66	4.37	7.82	0.91	——
Sulphate of Potash or Soda.	12.40	10.15	——	2.23	8.84
Magnesia,...............	——	——	——	——	21.8
Chloride of Sodium or Potassium,...............	0.28	4.63	2.8	2.27	3.06
Phosphate of Iron, ... Phosphate of Alumina, &c.	——	——	——	——	12.7

In these analyses Silica has not been taken into account, as it is found in all soils, and need not be supplied. One hundred weight of the ashes of potatoes, and the seeds of the following plants, contains

	Potatoes.	Wheat.	Beans (Vicia faba.)
Alkaline Phosphates,........	15.75	52.98	68.59
Phos. of Lime and Magnesia,	9.09	38.02	28.46
Phosphate of Iron,...........	——	0.67	——
Sulphate of Potash,..........	15 07	——	1.84
Carbonate of Potash and Soda.	51.70	——	——

What is wanting in the 100 of the above analyses is sand, coal, or loss. From these researches it appears, that for stalks and leaves we require other elements than for seeds. The former contain no alkaline phosphates, but they require for their development and growth a rich supply of alkaline carbonates and sulphates. On the other hand the carbonates are entirely wanting in the seeds, but the latter are very rich in phosphates. It is sufficiently obvious that a rational farmer must supply *both*, as well as all the others. If he supplies only phosphates, and does not restore the alkaline carbonates, his soil will become gradually barren—it will be exhausted in those necessary elements for the development of stalks and seeds, without which no formation of seed can be expected. If he supplies the alkalies, lime, and sulphates alone, in a given time he will get no more grain. All constituent elements of the manure, if they are supplied *alone*, have that great defect, that by them the soil is impoverished in other equally important elements. No *one* of itself can maintain the fertility. Keeping this in view, we may easily judge of the comparative value of artificial and natural manures, and all the various *arcana* which have been praised as *panaceas* for exhausted soils.

It is not less easy to understand why the farmers have such different opinions on the relative value of the constituents of manures—why one whose farm is rich in phosphates, produces an uncommon fertility by the application of nitrate of soda, or the supply of alkalies, while another does not see any favorable effect at all—why bones (phosphates of lime) produce in many fields wonders, and are not of the slightest benefit to others, which are deficient in alkalies or alkaline salts. From the composition of animal manures, it results with certainty, that by applying the latter, (solid and fluid excrements of men and animals) we supply to the soil not one but all the elements which have been taken away in the harvest. Fertility is perfectly restored to the field by a corresponding supply of this manure, and it may be increased by it to a certain limit. This will be the more intelligible, if we compare the mineral elements of the urine of horses and cattle with the mineral elements of herbs, straw, roots, &c., of our cultivated plants. It will be found that in their quality they are perfectly identical.

	Urine of a Horse.	Of Another.	Of Oxen.
Carbonate of Lime,..........	12.50	31.00	1.07
" of Magnesia,.....	9.46	13.07	6.93
" of Potash,........	46.09	40·33	77.28
" of Soda,..........	10.33		
Sulphate of Potash,..........	13.04	9.62	13.30
Chloride of Sodium,.........	0.65	——	0.30

These salts in the urine of horses amount to nearly 4 per cent.; in that of oxen to 2¼ per cent. of their weights. If we compare the composition of these different sorts of urine with the composition of the straw of peas, beans, and potatoes, of clover and hay, it will at once be obvious, that in stable dung we replace by the urine, the alkaline carbonates which we have removed in harvest. What in this urine, is wanting in phosphates and carbonate of lime and phosphate of magnesia, forms the principal constituent elements of the solid excrements of animals; *both together* (solid excrements and urine) restore the field to its original composition, and thus a new generation of cultivated plants meet with the mineral ingredients necessary for their development. If we farther compare the guano and the fæces of men with the composition of the animal urine, the analysis shows (rf. my book on agriculture) that both are entirely defective in *alkaline carbonates*—they contain phosphates and sulphates as well as chloride of sodium, but no free alkali—they contain phosphate of lime and phosphate of magnesia, in short their elements are in *quality* identical with the important mineral elements of the seeds of wheat, peas, beans, (rf. the analysis.) The urine of swine is in its composition intermediate between the urine of man and horses.

Analysis of the urine of swine.

Carbonate of Potash,........	12.1
Phosphate of Soda,..........	19.0
Sulphate of Soda,...........	7.0
Chloride of Sodium,....... " of Potassium,....	53.1
Phosphate of Lime,....... " of Magnesia,...	8.8
Traces of Iron,..........	

The solid excrements of Swine contain principally phosphate of lime.

What the practical results of a knowledge of the composition of these manures are, is clear. If it were possible to provide our fields with the dung of swine in sufficient quantity, we would replace by it, in a soil which contains *silica* and *lime*, all the remaining elements of the plants—the field might be made fertile for all kinds of plants—we have in it not only alkaline phosphates, the principal elements of the seeds, but also alkaline carbonates, which are required by the leaves, stalks, and roots. This purpose cannot be attained, however, by manuring with guano or human excrements alone, but perfectly so by stable manure, from its containing alkaline carbonates. If I have said that stable manure contains the mineral elements of the nurture of the plants, exactly in a state and condition in which they are furnished by nature—that a field manured by it resembles the primitive state of America and Hungary, this assertion will not be found exaggerated. It is certain that stable dung contains no alkaline phosphates, but nature does not furnish to the plants these elements even in the most fertile soil, although we find them in large quantity in all the seeds of wild plants. It is obvious, notwithstanding their absence from the soil, that the phosphates are formed in the organism of the plants, and that they originate from the phosphate of lime and magnesia and the supplied alkalies, by an exchange of the elements of both. The alkalies are necessary for forming *alkaline phosphates*, which cannot originate in the phosphate of lime alone. Both together are present in stable dung. In human excrements, and in guano, the alkaline carbonates are entirely wanting. The practice of the farmer, in some places, of supplying to the field not pure guano, but a mixture of it with gypsum, shows clearly that the phosphates of alkaline bases are really formed in the organism of the plants from the phosphate of lime and magnesia, because this mixture (guano and gypsum) contains less phosphate of potash or soda than the guano itself; or, in certain proportions of gypsum, no alkaline phosphates at all; the soluble phosphates in the guano decomposing the gypsum into phosphate of lime and magnesia, and into sulphate of potash. I am far from asserting that we should not provide the fields with alkaline phosphates; the excellent effect of the guano, and of the human excrements, is too well known to question it, and we perceive, from this fact, that plants are in this respect like domestic animals which with a normal food, are healthy and strong, but do not fatten. On the contrary, we know that if we prepare the food of these animals artificially, so as to render it more easily digested and assimilated, they are enabled to consume, in a given time, a greater quantity of it by which all their parts increase in weight. The same happens with plants if we give them their nourishment in a state most appropriated for assimilation; their capability to attract the other elements from the atmosphere increases and their development is accelerated. If we recollect that the favorable effect of guano upon our fields depends on its amount of *ammoniacal salts*, of *alkaline phosphates*, and the *other mineral constituents* of the seeds, but that it is defective in *alkalies*, the principal elements of the *herbs*, *straw*, and *roots*, it is easily understood why the opinions of farmers, on the value of guano as a manure are so very different. On a soil, which is defective in alkalies, its effect is small; on a soil rich in them, it increases the produce in a remarkable degree; but, as I have already observed, the continued application of guano must gradually diminish the fertility of our fields for a number of plants, because the elements of those organs, of the leaves, stalks, roots, &c., without which the plants cannot be developed and cannot produce seeds, are taken off in the harvest without any restoration of them. I think it, therefore, certain, that the stable dung can replace the guano to a certain degree, but not *vice versa*. A rational agriculturist, in using guano, cannot dispense with stable dung.

During my excursions in England, I have repeatedly directed the attention of the agriculturists, as Messrs. Pusey and Miles will, perhaps, recollect, to the necessity of supplying the alkalies, and not merely the phosphates and other salts; by a partial supply the equilibrium of fertility is not restored, and if we supply guano alone, we do not act wisely, because we consume our capital by rich interests, and leave to our children an exhausted soil.

And now, sir, the principles above-mentioned must guide us in the manufacture of an artificial manure. If they are neglected,—if the artificial manure is defective in one or two of the necessary elements,—the farmer in making use of it, will, in a very short time, discover the fact, by the injury he will have sustained from it.

In the manufacture of an artificial manure, it must be kept in view, that the application of stable dung, of human excrements, and of guano, is attended with a great loss, in consequence of the too great solubilty of their most efficacious elements, and this must be prevented by artificial means. This is evident, if we remember those countries from which guano is derived. It is known that the collection and preservation of the excrements on the African islands, and the coasts of Peru and Chili, depend upon the scarcity of rain in those countries. The best sorts of guano contain in fact, more than one half of their weight of soluble salts, which, if exposed to the rain, are in exactly the same condition, as under similar conditions, a heap of *salt*. They dissolve in water, and are removed. Some months of rain would deprive those countries of all their riches. The remainder would have lost the greater part of its fertilizing power. Such effects, however, take place upon the guano with which our fields are manured. Only a small portion of its efficacious elements produce the beneficial effect they are capable of doing, the greater part being carried off by the rain. The stable dung is, in this respect, in the same condition as guano; indeed, its principal elements are already in a dissolved state, and, therefore, are carried off more easily than those of guano.

A covering for those places in which stable dung is preserved, in order to shelter it from the effects of the rain, has been regarded in Germany as essential for preserving its manuring power. In consequence of the experience, that the soluble elements of stable dung are the most efficacious, it has in some cases, been drawn out with water, and it has been found advantageous to carry *only this fluid* to the fields. I need only refer to the foregoing analyses of the urine of animals in order to see upon *which elements* of it this effect depends.

The reason why, in certain years, the influence of the best and most plentiful manuring is scarcely perceptible, is, that during the moist and rainy springs and summers, the *phosphates* and *other salts with alkaline bases*, as also the *soluble ammoniacal salts* are entirely or partly removed. A great amount of rain and moisture removes in the greatest quantity, the very substances which are most indispensable to the plants at the time that they begin to form and mature seeds. The system of draining, which, of late has been so extensively followed in England, brings the land into the state of a great filter, through which the soluble alkalies are *drawn off*, in consequence of the percolation of rain; and it must, therefore, become more deficient in its *soluble* efficacious elements.

Attentive farmers must have observed that after a certain time the quality of the grain on land laid dry according to this principle, deteriorates; that the produce of grain bears no due proportion to the produce of straw.

What is more evident, sir, after these remarks, than that intelligent farmers must strive to give to the soil the manuring substances in such a state, as to render possible their acting favorably on the plants during the whole time of their growth. Art must find out the means of reducing the solubility of the manuring substances to a certain limit, in a word of bringing them into the same state, in which they exist in a most fertile virgin soil, and in which they can be best assimilated by the plants.

The whole attention of chemists should be directed to the attainment of this end. I am myself occupied with a series of experiments which lead me to hope that this problem can and will be solved. If it succeed, as I have no doubt it will, in combining the efficacious elements of manure in such a way as that they will not be washed away—their efficacy will be doubled; if in this manner the injurious consequences of the present system of draining be removed, agriculture will be based upon as certain principles as well aranged manufactories. Manufactories of manure will be established, in which the farmer can obtain the most efficacious manure for all varieties of soils and plants. *Then* no artificial manure will be sold, whose exact amount of efficacious elements is not known, and this amount will be the scale for determining its value. In the application of such rationally compounded manures, the good will of the farmers must help bring them to perfection. If, then, by the united efforts of the manufacturer and the farmer the best proportions are ascertained, a new era will arrive in practical farming. Instead of the uncertainty of mere empiricism, all the operations of agriculture will be carried on with certainty, and instead of waiting the results of our labors with anxiety and doubt, our minds will be filled with patience and confidence.

I am, sir, your obedient servant,
Giessen, 1845. DR. JUSTUS LIEBIG.

FROSTS.—Prof. Kirtland, speaking of the softening influence of bodies of water on frosty air, and particularly of Lake Erie, and of the Ohio river, says, "For several years in succession, I have found from observation, that the Dahlias were killed in the same night at Cleveland, and at Cincinnati, though they had been destroyed a month earlier in most of the counties intervening.

SALT FOR PLUM TREES.—Several persons speak of the efficacy of salt in causing fruitfulness in the plum tree, by repelling or destroying the curculio, as the result of actual experiment.

Domestic Correspondence.

NOTES OF TRAVEL IN THE SOUTHWEST—No. IV.

BY SOLON ROBINSON.

Mississippi—Visit to Mr. North, Ed. S. W. Farmer—and Mr. Gibson.

"There is no rest for the wicked"—and so, as Dr. P. and myself both belong to that family, we are off upon the morning after you and I, my dear reader, last parted company, and our first object is to visit friend NORTH, of the South Western Farmer, at Raymond. We found him in his office sticking type, for to that was he bred. Would you know what manner of man is this southern editor? He is perhaps forty years old—six feet high—slim built—has a very intellectual face and keen eye—and withal, has the organ of benevolence so large that he would gladly see all mankind as happy as himself. To say that he was pleased to see me, conveys but a faint idea of the real enjoyment that my visit afforded him, as I fully believe. Mr. North feels the greatest anxiety to improve the agriculture of the south, and as a natural consequence to elevate the moral condition of the cultivators of the soil. 'Tis for this holy purpose that he has labored several years in publishing the South Western Farmer with a list of subscribers amounting *almost to* 400, and this the only paper devoted to agriculture in the state of Mississippi, or for the states of Louisiana, Arkansas, and Alabama. It seems a hopeless task to attempt to enlighten such a population; but Mr. North is full of hope, and intends as soon as the present volume is closed, to enlarge and improve the next, and being assisted by the able and ever ready pen of Dr. Phillips, hopes and believes that the farmers of the south will come up to his aid and sustain the paper. I hope so, but I must own that my hope is not strong.

Raymond is the county seat of Hinds, 16 miles west of Jackson, the seat of government, which is in the same county. It has a court-house and very expensively built jail, and several very humble looking churches. The town does not wear a very flourishing look, and the surrounding land, to my eye, looks decidedly poor; the soil, sandy and white clay, and timber, pine and oak. The surface of this county is, in comparison with the others I have visited, pretty level. It has, upon Chittaloosa on the west, and Pearl river on the east, some very rich bottom land, but subject to inundation, and is yet covered with timber.

After spending two days of most pleasant sociability, the Doctor and I started for Natchez, about one hundred miles southwest. The day previous had been for a great rarity a very rainy one, and during this day we had some very fine sprinkles; so that I began to discover that if they don't have any of our frozen weather, they are not far behind in the mud line.

After leaving Raymond, the land becomes quite hilly in the course of the day, and a great portion of it still bearing its native growth of pine, oak, and some hickory, and upon the creeks, a good deal of sweet gum—the only value of which is, and that ought to be universally known, that a strong tea made of the bark will cure any kind of bowel complaint. The splendid "magnolia grandiflora," in places here is so abundant that it gives the woods a cheerful aspect with its beautiful evergreen leaves. The evergreen holly too, is abundant.

This is the 2d day of March. The oat fields are looking green, and corn begins to show its rows. As is the fashion, we stopped at night with a planter in Claiborne county, by the name of Gadi Gibson. It was dark and showery, and as is also fashionable, we found the number of visitors "just what might be expected in Mississippi," and thereupon we proposed to withdraw, and not add what seems to us at the north would be a burden. But we were too late. We had told who we were, and we were known by name, and to such a Mississippian's house is never full, and Mr. Gibson is a true one, born upon the soil, now near fifty years old, and as stout and robust as one of the Green Mountain boys of Vermont. Mrs. Gibson is also one of the finest specimens of a healthy woman that I ever saw. To them at least the climate is salubrious. By the bye, I saw at Raymond, a hale and hearty old man of 72, who was born in what is now Mississippi, though then under a foreign government. This man told me he had lived upon the same soil under three governments, English, Spanish, and American. I have no doubt but what it is more the fault of the people than the climate that they suffer with sickness.

Mr. Gibson lives upon a very good plantation, and has, the Lord knows, how many negroes around him, but, as is the fashion, lives in a log cabin, and what appeared a little unfashionable, the owner *takes the papers*. But, as is also the fashion, our lodging room was in "a separate establishment," across the yard from the main centre of the small village that it takes to make up a dwelling place "in these diggings." Another fashion we find here, as is often found hereabouts, and that is the capacity of a Mississippi stable, which is known as "*the lot,*" and is surrounded with a fence sixteen rails high, with a gate of corresponding height, into which said lot are turned all manner of horse flesh, to eat corn out of a capacious trough in the centre, and do their own fighting on their own hook for a position. Corn is the only grain, and corn blades, called "fodder," the only other kind of feed ever given, for which the same trough answers.

Now this is certainly a very primitive kind of stable, and possesses this advantage that it can be enlarged very easily to accommodate the increase of stock. It is also said to be healthy on account of its airyness.

Mr. Gibson keeps his sweet potatoes different from most others. He has a cave cellar, the door being made open work to serve as a ventilator, in which they keep well. The common way is to put them up in "pumps"—a term that I am sure will be as difficult for my northern readers to understand as is the word "chores" here. But the one means a pile of potatoes covered over with dirt, having a hollow log or box bored full of holes, set upon the ground and running out at the top through the centre of the pile, to give ventilation; for without it, sweet potatoes will not keep. At the north, I believe a good way to keep them would be to put them in small parcels with Irish potatoes in a cellar not too warm, but very dry. Or if you can contrive to keep sweet potatoes always dry and warm, they will always keep. The same thing of dahlia roots.

For the accommodation of my southern readers, let me explain that the word *chores* means all the little jobs of work about the house, necessary to be done of a night and morning. Dr. Phillips is so well pleased with its expressiveness, that he has adopted it in his family.

Being naturally an admirer of beauty under whatever form it shows itself, I was attracted to notice a very beautiful lace cap of Mrs. Gibson's, upon which she showed me several others "as fine as silk," and all the work of her own hands—beautiful domestic manufactures.

March 3d—being a little showery, afforded our host an excellent excuse for detaining us another day, and he would have done the same the next—for this is southern fashion, among those who take the newspapers—this being a better criterion to mark civilization "than the use of soap."

Negroes upon large plantations are always under the charge of an overseer. Their wages vary from $250 to $800 a year. A common negro man when hired out, gets from $10 to $15 a month. A woman cook or good house servant, the same. A negro carpenter or blacksmith, from $25 to $45 a month. Corn is now worth from 60 cts. to $1 a bushel, in the interior of the state. Cow peas $1 to $1.50. Sweet potatoes, 50 cts. Irish do., 50 cts. to 75 cts. Oats, 50 cts. Millet, $1, to $1.50. Cotton seed for planting, 50 cts. to $5 a bushel. While at the same time cotton is not worth on the plantations over an average price of 4 cts. a pound.

While off the go ahead track, I will make a memorandum of the weather here in Mississippi since last noticed—this is for comparison with any other place you please.

Feb. 19. Warm, sunny, dry—roads fine, streams low.

Feb. 20. Cloudy—little rain in morning—then clear and cool.
" 21. Mild—somewhat cloudy, and rain at night.
" 22. Cloudy and some rain—mild.
" 23. Mild—flying clouds.
" 24, 25. Sunny and warm—"coats off."
" 26. Quite warm and dry—roads dusty—"jackets off."
" 27, 28.—Clear and mild—fire needed morning and evening.
March 1, 2, 3, I have noticed.

March 4th, which many an office seeker at Washington will be able to remember, and compare with what is past, present, and future, as he hopes it will be—if not warm, at least mild, certainly not stormy—certainly was stormy in Mississippi, in the morning, after which we started again southward over a hilly region composed of argillaceous alluvium, badly cultivated and full of gullies—the streams broad, and gravelly bottoms, deep sunk between high sandy banks that are rapidly working away to help extend our territory farther and farther into the gulf of Mexico. Passed through the town of Port Gibson, which is the best town I have seen in the state. It is situated on a stream called Bayou Peire, a few miles from the Mississippi, from which steamers come in high water to carry out the cotton from the surrounding rich country. Many of the owners of neighboring plantations have their residences here, which give the place an air of wealth and grandeur.

We passed to-day a few miles north of this town, the "old Indian boundary," where the traveller from New-Orleans entered the wilderness that extended almost to Nashville, Tennessee. This was less than forty years ago. Port Gibson is now about 40 years old, and we stopped all night near Cole's creek, with a man who has lived 40 years upon the same spot—long enough to have learned to live better, and have more of the comforts and conveniences of life around him—*but he did'nt take the papers*—and so there is neither fruit, nor flowers, nor shrubbery, nor garden nor good cultivation, nor has the land upon this "first choice in the country," improved under the constant wearing that it has been subjected to. Happily for the owner, his plantation is nearly level, or after forty years subjection to his constant control, he would now be at work upon the second soil, the top one would have departed. This man is not much in favor of improvement. His place used to be a noted "stand" upon the "trail" from Natchez to Nashville, before the *improvement* in steamboats turned the tide, and stopped the influx of cash into his pocket.

After leaving his house we passed a remarkable stream called "Cole's creek," which we were unable to cross the evening before. When the country was first settled, as our late host told us, "he had often fallen a tree from bank to bank," which are now an hundred rods apart and continually widening, as the soil is so loose that as soon as the roots decay there is nothing to hold it together. And the bed of the stream is so full of quicksands, that crossing after a freshet is both difficult and dangerous, and life and property have both been lost in the attempt. If you ask why don't they bridge it, I beg you to read in your bible that "a certain man built his foundation upon the sands, and the floods came," &c., and so would they come here, and neither bridge or mill dam would stand any more chance to stand, than a cotton planter stands to grow rich at the present price of the staple.

In the course of the morning, we passed several other branches of this stream of the same character and began to find the country more hilly, the soil of alluvium, and having the same kind of beds of marly loam as noticed in Warren county, and nearly the whole of great fertility and extreme bad cultivation; full of awful gullies, and showing thousands of acres in sight of the road so past the power of a negro to raise cotton upon it, that it is thrown out to the common as utterly worthless. And yet much of this waste land is covered with Bermuda grass, of which I shall speak hereafter—and that in a southern clime affords the finest pasture in the world, and would sustain great numbers of sheep. Cotton—cotton—cotton,—till the land is cottoned to death, because cotton is the "great staple," which in the opinion of a cotton planter, only needs to be sustained, and that will sustain all the links of the great chain of commerce—forgetting that the support of that staple, into which it was driven pretty hard a few years ago, was nothing but a "quick sand Bank," and the floods came and the staple drew out, and down went the chain, dragging prosperity and improvement with it. And these cogitations bring us to a gang of 160 negroes working the road, "because it is so wet they can't work on the plantation." And what will such a host do? Not half as much good, though perhaps more labor, as one-tenth the number of yankees with a yankee team, plow and scraper would do.

Some curious features are seen upon this road—upon some of the hills it is worn down in a ditch like a deep cut in a railroad, 20 or 30 feet deep; while the apex is left so sharp that the forward wheels begin to descend before the hind ones have done ascending.

SMOKY CHIMNEYS.

"Does smoking offend you?" said the landlord to his newly arrived boarder. "Not at all, sir." "I'm very glad to hear it, as you will find your chimney fire is constantly given to the practice." Most, however, have little fancy for smoke even if largely diluted with air; those who spend half an hour every morning with watery eyes over a perverse fire-place, and whose room is filled with smoke at every gust of wind, regard it as a decidedly positive evil.

Hence there have been a thousand and one contrivances to prevent it. Having had my own share of the evils of smoke, and in expedients to get rid of it, I propose to give my experience for the benefit of others. The chimney which gave me the most trouble was one far below the others, rising from a roof much lower than that of the rest of the dwelling. When a strong wind swept over the house and down on the top of the chimney, the flame spouted out of the door of the kitchen cook-stove, and the room was immediately filled to suffocation. I first adopted a cover similar to that recommended in Loudon's Suburban Gardener as infallible, represented in fig. 103, consisting of a cap of sheet iron in the shape of a low pyramid, supported a little above the top of the brick chimney on points at the corners, the smoke passing out just under the eaves of the cover. I found it to answer the purpose whenever the wind swept *down* upon it uninterruptedly, from over the house. But when the wind blew from an opposite course or *towards* the house, and was thus thrown into a confusion of eddies, first upwards, then downwards, this moment to the right and the next to the left, and then apparently all ways at once, it totally failed of answering the desired end; and when I saw in number 9, vol. 10 of *the Cultivator*, Mott's figure of a chimney cap, which would always draw the current upwards, I resolved to try it. I went to the tinker's and had one made as represented in fig. 104, consisting of an upright piece of stove pipe, nine inches in diameter, made square at the lower end to fit the brick chimney, and connected at the upper end with a piece of horizontal stove-pipe, the same size, but considerably enlarged at its two open ends. *The chimney now never smokes an atom.* The tinker charged me about two dollars and a half for his work, which was about one dollar more than he ought to have done; but to come home and find smiling female faces, and a clear air within doors, as is now the case—in the place of eyes filled with smoky grief, and lungs with choking breath, as formerly—any decent man would of course consider himself repaid many times the amount of that little sum.

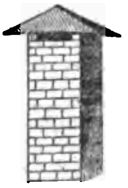


Fig. 103.

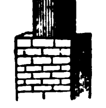


Fig. 104.

I dont understand the *rationale* of it; but one thing I know, that whenever there is wind, let it be from above or beneath, or from whatever quarter, the current through the chimney is *upwards*. This is the case when there *is* no fire at all, if there is only wind. On a still morning, there may be a little smoke in kindling a fire before a current of hot air is formed, but at no other time.

Mott does not say that he has patented this invention; if he is a man of sense he has not; for defending patents is only another name for "vexation of spirit." But if he has patented it, I hope he will allow me to use my cap for this "*recommend*" I have given it. And to those who cannot afford to subscribe for the Cultivator, I can say that this one fact learned from it, is worth many year's subscription. J. T.

SELECT AMERICAN GRAPES

In the Brinkleyville (N. C.) Vineyards.

Our successful experiment of grape culture and wine making, is mainly attributable to the system being *American* throughout. And, as to kinds of grapes, not only, after trial, rejecting foreign, but also such natives as are not profitable in most respects. On canopies supported by posts ten feet each way apart, and all clear beneath, for passage of wind, persons, or teams, might be seen, a month since, a complete spread or sheet of grapes, so thick in many places, as to yield at rates of a thousand and more gallons of wine per acre. And now, after having made our barrel of wine a day for some weeks past, and entertaining visitors, sometimes more than twenty a day, the vineyards are very full still, and a stranger might conclude that few grapes had been abstracted, and that only from some vines. But designing a mere list of most select vines, with a passing remark or two, we proceed at once to enumerate—

1st. Such grapes as are good and profitable in every respect, and from most of which, we make not only gallons but barrels of wine annually, of late years.

1. The White Scuppernong, the noble native of our own state. But north of latitude 37½ degrees of no peculiar excellence.

2. Weller's Halifax—a native of this county, but calculated, so far as we have learned, for any part of our country. Out of a large number of vines from the seed of this grape, one we call the Halifax seedling, promises according to best judges, to be inferior to none in every respect. Its culture is yet limited. Fruit like the Catawba, but sweeter.

3. Vine Arbor—so called from its very large leaf, as well as extended growth, and consequent peculiar fitness for arbors.

4. Somerville.

5. North Carolina. This is late in ripening, and its peculiar excellence is for wine, not table use.

6. York Madeira.

7. Fragrant. This delightfully perfumes the air around when ripe.

The above kinds have all large berries, and average the Isabella and Catawba in size, and consequently are not subject to depredations from birds. We have several other fine sorts of like sized grapes. But we proceed to those of intermediate size, (or that say, of buckshot,) in our first class, viz:—

8. Norton's Virginia Seedling, called after the late Dr. Norton, of Richmond, Va. This we find one of the finest in all respects; as for table use, wine making, productiveness, (capable of 2,000 gallons per acre,) and free from rot.

9. Cunningham. This is also a grape from Virginia. most excellent for eating, and with one difficulty only as to wine qualities, viz: on every raceme, some small green grapes are interspersed among the ripe ones. But to obviate this we omit picking out the green berries, and make the wine in the way the late Mr. Herbemont made his best Madeira, or a white wine from his colored grape; that is by putting the grapes unmashed under the press, and after pressing, the ripe grapes only are found mashed by pressing.

10. Woodson—also from Virginia; much later ripening than the Cunningham; and not so good for the table.

11. Lenoir—a grape of a grade smaller berry. Among the first of peculiar excellence in ripening here.

In the fine vineyard of Mr. John Carter, near Richmond, Va., he showed me, some years since, the Clarence of France, imported by him as *identical* with the Lenoir. If Mr. Carter is not mistaken, this is a foreign grape, only not subject to rotting in our country. The juice is very strong, and as the late Mr. Herbemont observes, capable of making a good keeping wine without the addition of either spirits or sugar.

But omitting further enumeration of excellent grapes of intermediate size, we proceed to the second general class, viz:—Of some kinds excellent in many respects, but exceptionable on account of propensity to rot, (at least at the south,) smallness of berry, &c., and therefore no dependence on them for a wine crop; though a few of each are retained in the vineyards as a variety of fruit, and in contrast, and for visitors. Among a considerable number of kinds in class second, the following are here noticed.

1. The Catawba, the favorite grape of Mr. Adlum, Georgetown, D. C., and now I see from Agricultural periodicals, mostly cultivated in the northern and middle states. But its proneness to rot on the vines renders it a very uncertain fruit in the south; and the older the vines the worse, so that some, as I learn, in this state and Virginia have given up vineyard culture in despair of profit, whose principal vines were the Catawba; and

2. The Isabella. And no effectual remedy we have found for this tantalizing casualty, but that of cutting down, in the fall season, most of the vines of these sorts, and grafting on their stocks, some of the first general class, as good at least in every respect, and far better as to certainty of a well matured crop. Three years since we procured a kind of Catawba said not to rot. The young vines of what we call Eaton's Catawba, so far, have matured their fruit.

3. Colesvine.

4. Alexander.

5. Constantia or Vevay. This last is that chiefly cultivated by the Swiss settlers in Indiana. But however succeeding with them, when the vines are young, at least it proves here one of the rotting kinds; although it, as well as all just named, produce fine, large fruit when happening to mature.

This second class now continued with grapes of intermediate size, as

6. Herbemont's Madeira. This as seen in the columns of the "American Farmer" was called the Warren, or Warrenden, ere it received the above name from the late excellent Mr. N. Herbemont, of Columbia, S. C., who gave it notoriety. It appears to be of foreign extraction, from the shortness of the vine joints, and especially its proneness to rot. Mr. Herbemont himself calls it a tantalizing grape; because, as he states, just when giving promise of an abundant yield (once he made at rates of more than 2000 gals. per acre from it,) its frequent habit is to begin rotting without any assignable cause of too wet or too dry, or the like.

7. Longworth's Ohio. The distinguished agriculturist, Mr. N. Longworth, near Cincinnati, sent me a few years since, some cuttings of this by mail, in a newspaper, and by grafting I have cultivated it to some extent. But here it is of no peculiar excellence, and I find, prone to rot, though Mr. L. informed me it had proved a most excellent variety in his locality.

We have procured from nearer and more distant parts of our country, a considerable number of other kinds of intermediate sized berry, and exceptionable in some respects; among which I name

8. Baltimore Seedling.

9. Bland's Madeira or Red English.

10. White English.

11. Enfield.

12. Hunterville, &c.

And also several varieties of small berry and small yield, though otherwise fine. Three only of these we add to our list of the 2d class, viz:—13. Wilcox. 14. Guinard's Native. 15. The Elsingburg.

We have under trial a large number of seedlings, and of those procured from every where we could hear of a good native; and may give the result in due time.

SIDNEY WELLER.

Brinkleyville, Halifax county, N. C., Sept. 15, 1845.

INFLUENCE OF THE STOCK IN GRAFTING OR BUDDING.

Mr. Editor—There are few subjects which have occasioned more discussion among Horticulturists, or occasioned more diversity of sentiment, than the one named at the head of this paper. By some, it has been supposed that the quality of the fruit produced on grafts was much influenced by the character of the stock upon which the graft was set, a change attributed to the difference in quality of the juices of the two parts. This opinion was perhaps more common formerly than at present, and was based on the supposition that the juices of the stock taken up by the roots was immediately available in the production and growth of the fruit. Others have concluded that although the stock exercised some influence on the graft, it was only in consequence of the means which it offered for the more free circulation, or retardation of the sap. This opinion is the prevailing one, and is founded on a better knowledge of the physiology of plants, which teaches that whatever elaboration or change the sap undergoes, is performed in the leaves of the plant or tree, and therefore must possess the same qualities of the graft, and not of the stock.

One of the earliest writers, to give a decided opinion on this subject, was Lord Bacon, who says, "that the scion overruleth the graft quite, the stock being passive only." Lindley, one of the ablest of writers on Horticulture, says,—"Those who fancy that the quince communicates some portion of its austerity to the pear, can scarcely have considered the question physiologically, or they would have seen that the whole of the food communicated from the alburnum of the quince to that of the pear, is in nearly the same state as when it entered the roots of the former. Whatever elaboration it undergoes, must necessarily take place in the foliage of the pear; where far from the influence of the quince, secretions natural to the variety go on with no more interruption, than if the quince formed no part of the individual." Miller, in his work on Gardening, says, "crab stocks cause apples to be firmer, to keep longer, and to have a sharper flavor." Mr. Knight, speaking of the change produced in fruit by placing scions on different stocks, says, "the effects produced by grafting are similar to those which occur when the descent of the sap is impeded by a ligature, or by the destruction of a circle of bark;" that is, it dwarfs the tree, and causes a more rapid maturity, when scions are placed on slower growing stocks, as the apple on the crab, the pear on the quince, &c.

It is also evident that grafts do not affect the stock; that is, the scion does not impart any of its distinctive qualities to the part of the tree below the point of insertion. Still the annual layers of wood formed on the stock must have been elaborated in the foliage of the scion, as asserted by Professor Lindley, and should, unless changed in its nature in passing from the scion to the stock, possess the same qualities. That it does not, is certain from the fact, that sprouts forming in the latest layers of wood, always retain the character of the stock, instead of the scion that has formed the wood from which they sprung, and that furnished the elaborated juice for their nutrition. It appears clear therefore that during the life of the individual, the point of junction formed by the meeting of the stock and the scion, constitutes a line of demarcation, across which the influence of either cannot pass. In some kinds of trees this impassibility is rendered very perceptible. For instance when the pear is grafted on the apple, the ring formed at the point of insertion, and the more rapid growth of the pear shows that the peculiar qualities of the pear wood are unable to force themselves below the scion, and give to the layers of the stock the same growth which belongs to the scion, and which would result, were not the qualities of the elaborated sap changed at that point.

Some have supposed that the influence of the stock is so great, that trees raised from the seed of grafted or budded fruit, will, in their fruit, resemble the stock, rather than the scion. This notion has been brought to my recollection by the third no. of that beautiful work, the "Orchardist's Companion." In that number, among the other figured fruits, is a fine specimen of the apricot, presented to the proprietor by C. Morris, of Philadelphia, who, in a note accompanying it, remarks as follows:—"The tree which produced the fruit is a graft upon a *plum stock;* my next door neighbor has a tree growing from a stone of my apricot, which produces an ordinary blue plum, ripening late in the season; the trees are very different in appearance, both in leaf and growth; my apricot ripens the earliest of any tree of the kind—say early in July." I find from the Farmer's Cabinet, which has noticed the occurrence, that many seem to consider the production of a plum from the seed of an apricot grafted on a plum stock, as a species of transmutation, akin to that of wheat into chess, a notion which has too long abused the public mind. The truth seems to be that the apricot is rather a plum than a peach, with which it is usually classed, and its tendency to return to its original type appears more manifest when the favorable circumstance of a union with a plum stock is present. This view of the subject will appear the more reasonable, when it is remembered that in England, the peach and nectarine, as well as the apricot, are usually propagated by grafting on plum stocks; but it is believed no one has ever heard of the plum stock having such an influence on the peach or nectarine, as to cause the seeds of these to produce plum trees. The observation of Mr. McIntosh on the culture of these fruits, would seem to be decisive on the subject of change.

It seems probable then, that the stock exercises no other influence on the scion, than what is owing to the *quantity* of sap furnished, and that the kind or *quality* makes no difference whatever; since the formation of wood, flowers, and fruit depend on the juices elaborated in the scion. It is on the principle that the retardation, or lessening the supply of sap, increases the quantity of the fruit, that ringing or the removal of a narrow strip of bark, and twisting a wire around a branch is sometimes resorted to by orchardists and gardeners. It is for a similar reason that grafting apples on crab stocks, pears on the quince, &c., is practiced; the supply of sap is reduced, the tree produced is dwarfed; and the certainty of fruit is proportionably increased. It is certain that scions taken from the same tree, and grafted into trees indicating by their vigor or habits of growth, a difference in the supply of sap, will when they come into bearing, produce fruit materially differing in size, and also in some slight degree in appearance, color, and taste. This is sufficiently accounted for on the principle laid down above; and there appears no necessity for resorting to any other method of the stock's acting on the scion, to explain these variations. It is a subject, however, of some consequence to the horticulturist, and I for one should be pleased to have some of your correspondents who have experience in such matters, give us their opinion in relation to it. FRUITGROWER.

ANNUAL FESTIVAL OF THE MASS. HORT. SOCIETY.

Mr. Tucker—Having been a delegate to the Massachusetts Horticultural Society, at their recent exhibition, I will make a few comments thereon, which may not prove uninteresting. The collection of pears exhibited was very numerous, and comprised a large number of the newer varieties, and very many also of the old varieties that succeed well on walls and in sheltered gardens when budded on the quince, but are useless for open orchard culture. Leon le Clerc, of Van Mons, Clion, Columbia, (native,) Flemish Beauty, Beurré Diel, and Duchesse d'Angoulême, were the most attractive for their size and good quality united. The collection of pears from the garden of Col. Wilder, the liberal and distinguished President of the Society, was the most récherché in its assortment. The collection from Mr. Manning was more numerous, but less select. Other collections from B. V. French, Josiah Lovett, J. S. Cabot, Samuel Walker, O. Johnson, Rev. A. B. Muzzy, Jacob Deane, J. M. Ives, and C. Newhall, Esqrs., were highly respectable both in numbers and excellence.

The exhibition of apples was secondary in extent to that of pears, and the assortment of peaches and plums was in no wise extraordinary, being very limited in variety, and deficient in a number of estimable kinds which mature at that season, but whose culture appears not to have been attended to. The Floral decorations of the Horticultural Hall were on a very enlarged scale, and extremely magnificent. The premiums for these ran as high as $30, but it must have cost twice that sum to construct either the "Chinese Temple," the "Floral Temple," or the "Gothic Pyramid," which were exhibited on that occasion. On the third day of the exhibition, (Sept. 19th,) the Society and its guests assembled in Faneuil Hall at one of the most imposing feasts, and perhaps the most so, of any our country has ever witnessed. The floral decorations of the tables, and those environing the rows of columns, seemed to impart an air of enchantment to the scene, and there was a hallowed gratification in thus assembling in that old cradle of Liberty, enhanced by the scintillations of intelligence and beauty, emanating from above 500 ladies, most brilliantly attired, who honored that banquet by their presence. Sir, it was a glorious scene; and when the distinguished speakers were called forth one by one, by appropriate complimentary sentiments, it was most gratifying to the soul of an American to hear each one render homage to the consecrated spot on which we were assembled, and to the glorious emblems, the eagle, stars and stripes of our country, which overhung that noble hall. The repast consisted of the choicest fruits of all kinds, with which were richly intermingled, the beauties of sentiment, of rhetoric, and of poesy. Truly this magnificent festival may be justly characterized as the highest "feast of reason and flow of soul." Yours, most respectfully, WM. R. PRINCE.

Prince's Lin. Garden and Nurseries, Flushing, Oct. 25.

INTELLECTUAL IMPROVEMENT AMONG FARMERS.

We have received from "H. T. C." a well written essay, for which the above would be a not inappropriate head. We doubt not our readers would be gratified by a perusal of the paper entire, but the most we are able to do under the press of various other communications, is to present the following extracts:

"The *advantages* of intellectual improvement among farmers, are (some of them at least) as follow:—

1st. The sounder the root, the more vigorous is the tree; the firmer the foundation, the more steady the building; the purer the fountain, the clearer the stream. The improvement of the agricultural mind strengthens this root, consolidates this foundation, purifies this fountain. Hence the whole nation is benefited.

2d. The improvement of taste in the fine arts, developed in landscape gardening, architecture, &c., will beautify the country, draw closer the cords of patriotism around every heart, and exalt and purify the feelings connected with our native land.

3d. It will greatly increase the respect with which the American character is regarded abroad.

4th. It will have a moderating effect on political contentions, when the public mind is less liable to imposition; more determined on having men of integrity and worth to represent it in our national assemblies; and better capable to judge of that worth.

5th. Prejudice, that mighty opponent of all reason, improvement and truth, will be in a great measure abated.

6th. Sound literature will be circulated and read to a greater degree than has yet been attained, instead of the poisoning trash now so widely disseminated.

7th. We shall have a national literature.

I now proceed to show the *perfect possibility* of carrying out this improvement of the agricultural mind; and what I have to say will be applicable to every farmer in the land, and involves the highest and most precious interests of our beloved country.

The soul of all success in any business is METHOD. What would become of the merchant if his day-book and ledger were not kept with the most methodical accuracy? What would befal the banker, the tradesman, or the scholar, if all their operations were not conducted by the same regular processes? And what hint is so powerfully suggested to the farmer as this very method, by her with whom he holds constant communion—dame Nature herself? The seasons, spring and summer, autumn and winter, roll round in an eternally regular succession. The seed germinates, the blade appears, the ear, the blossom, and the grain—each in its turn, succeed the other by the same unvarying method. Animals are brought forth, nourished and matured by the same unchanging law. The rain and sunshine, the frost and the dew, the storm and the calm, are always punctual in their season. Why therefore should the farmer, in the midst of all this regularity, be the only thoughtless, irregular, confused being existent? Why, on the contrary, may not *all* his operations be conducted by a fixed plan from year to year; his farm be laid out in a regular number of fields, in which a regular rotation of crops may follow one another in a regular order; his time and that of his laborers disposed of according to a regular system; his family and household operations conducted by the same regular method from day to day? All this planning may be done with an *immense* saving of time and thought, compared with the usual rambling, shambling way of doing business; and when once it is settled there is no more thought about it. All is as regular as clock-work."

HOGS WILL NOT LIVE ON AIR.

IF it be a fact, as contended by some, that the introduction of the Berkshire breed of hogs has been of no benefit to the country, it cannot be denied but that it has been the means of drawing the attention of farmers to the subject of improvement in that branch of rural economy. Whether this improvement has been effected by crossing or selection, is of no consequence, so long as the improvement progresses.

This improvement is apparent in all sections of the country which I have visited, and more particularly in the immense droves, which pass through this city, (Albany,) from the central and western counties of this state on their way east. In looking over a drove of 300 or 400, you would hardly find one which would appear to have any affinity to the "Land-Pike" or "Alligator" breed, which formerly occupied the places of the full, plump, round-bodied, small boned grunter of the present day. They cannot, to be sure, travel quite as many miles in the day, as the long-legged racer of former years; but what they loose in travel they make up in thrift.

It is a common remark of strangers that although hogs are suffered "by authority," to run at large in the streets of our city, they award us the credit of having very decent looking ones at least; and it is a fact that a mean looking hog is a rare sight hereabouts. Although there are but very few of the pure Berkshire breed to be found in this section, traces of them may be seen in most of those we meet.

It has always been my creed to stick to one breed of animals until I could find a better. That there is a great difference in the amount of food required or consumed by one breed over another, must be admitted by every person who has paid any attention to the subject. Show me a hog with a plump, round body, small head, short nose, small, upright ears, of a quiet, lazy disposition, and I will warrant him an easy keeper.

It is said by some farmers, and I have no doubt but they believe it, "that the superiority of a breed may be found in the feeding trough." But a little attention to this subject, I think will convince them of their error. I have no idea that there is any breed that will live on air; but the manner in which some of my breeding sows lived and improved in flesh last summer, staggered my credulity. After taking the pigs from the sows, rings were put in their noses, and they were turned into a small pasture to feed on grass, with an ear of corn each per day; the drouth soon dried up the grass, but the hogs continued to improve, and did not seem to care much for the corn, which was soon discontinued. They continued to improve, and we almost persuaded ourself that we had found the grand desideratum, long sought for, viz: a breed that would live on air; but lo and behold! what was my astonishment on going into the field not long after, when I discovered the great secret. In the spring and early part of the summer, my man that comes to the city every Tuesday and Friday, with vegetables for the hotel, and takes the offal of the kitchen, with which I feed my pigs, also took the refuse of the fish market, amounting to one and two barrels each time. This was deposited in the lot where the hogs run, and covered with soil, a layer of fish and a layer of soil alternately, intended for manure. The keen scent of the hogs had led them to the heap, into which they soon made their way, and feasted sumptuously every day, which accounts for their great improvement in condition, and turning up their nose at the corn.

Nov., 1845. C. N. Bement.

ON THE CURING OF PROVISIONS

FOR THE BRITISH MARKET

L. Tucker, Esq.—The curing of meat is a business we are daily engaged in; an art attained by precepts and founded on principles, the knowledge of which is of immense importance not only to the health, but to the comforts and economy of man; yet strange to say, it is a science about which, not one word has ever been written; and that we look in vain through the printed masses of the new and the old world, for a single treatise upon the subject. When you reflect upon this fact, you and your readers will, I trust, be lenient in your criticisms on this, *my* first attempt at a *first* essay on the subject; more particularly when I tell you, I am prompted by no other motive than to increase the value and interest of your invaluable publication; to instruct your readers, and to open the eyes of the many persons engaged in the business to the minutiæ that must be observed, and the difficulties that must be overcome, in order to pursue the trade successfully.

Ude, in his celebrated book on Cookery, in giving instructions how to make Hare soup, significantly says, "first catch the hare." It is not of more importance to catch the hare to make the soup, than it is in putting up beef for the British market, to first get the beef of the right size and quality. The quality is found amongst the the fattest and best fed cattle you can obtain; and the size must range between 600 and 800 lbs., being that which invariably cuts up to the best advantage; having more prime pieces, both in weight and number, compared with the whole weight of the carcass, than any other size we can select. Having obtained the cattle, our next care must be to have them properly killed; and here it is of great importance to your success in curing, that not only the blood of each animal should be well and thoroughly drawn, but that every animal should be allowed sufficient time to rest off its journey, say from 24 to 48 hours, according to circumstances, so as to allow the fever consequent on driving any distance, to subside, before you kill it.

The business of packing is divided into two parts; the first is to cure the meat; the second, is to preserve it when cured. In the packing house, the first preparation that should be made for business, is the making of the brine in which the beef is to be cured. By way of parenthesis, it may as well be here noted, that neither Kanawa, Zanesville, or Goose Creek salt should be allowed to touch your meat, either directly, by mixture with other salt, or indirectly through the medium of brine, for so sure as any of these salts are used, so sure will your meat become slimy like fish, and be imperfectly cured. The best salt I know of, for curing, is the Liverpool coarse sack salt, as it is called. The brine should be made for at least 10 or 14 days before it is required; it should be made in large vats or hogsheads, with a sufficient quantity of finely powdered saltpetre added, to give the beef that red color, which so pleases the eye from long habit; it should be allowed to settle down and refine, and when drawn off into the tubs where the beef is to be cured, it should be clear, and entirely free from any sediment or impurity. The strength should also be tested, which, in the absence of a regular brine tester, may be done accurately enough by placing the half of a hog's head, weighing from 7 to 8 lbs. in the brine, which must float *perpendicularly*, the snout two inches above the surface, before the brine can be pronounced strong enough.

The next operation in the packing house, is the cut-cutting up of the beef into 8 lb. pieces, about which it is impossible to give any specific directions, as the number of pieces must entirely depend on the size, weight, and thickness of the animal. This department of the business must be guided by the hand and eye of the practical tradesman, and directed solely by his good judgment. One thing may here be remarked, that it is always well to leave two prime pieces of every carcass, say off the standing ribs, whole and uncut, to weigh from 32 to 38 lbs., and cured in that way, for two reasons; first, when cut up to the proper size after they are cured, it leaves a freshness and bloom on those pieces for the heading, which gives to the purchaser, on opening the tierce for inspection, a certain guarantee that the meat was handled by a tradesman; and secondly, it will facilitate the scaling of the meat much, as should 37 pieces be in the scale, wanting one piece more to weigh 8 or 10 lbs., more or less, that piece can be cut off this larger one to a great nicety, and avoid the delay and trouble of tossing a pile of meat over to hunt up one piece from the many, of the exact weight wanted. In scaling your meat it is not necessary to put more than the exact weight 304 lbs. in, as beef when cured, and put into tierces, will regain fully 5 per cent. of the 10 per cent. it will have lost in the process of curing.

As your beef is cut, the coarse pieces of the fore quarter, such as the clods, stickings, and shoulder pieces, should be selected and well rubbed with dry salt, and put into pickling tubs by themselves; the round, rump, and jump pieces of the hind quarters should in like manner be selected, well rubbed with dry salt, and put into pickling tubs by themselves, and then your prime parts, such as ribs, sirloins, plate and brisket pieces, should be selected, and put into the pickling tubs by themselves, and *without being rubbed*. Those pieces being the most tender, and least veiny parts of the beef, will cure more easily and quicker than the coarser parts, but after remaining a week in the brine they should be drawn, and if the brine has not sufficiently stricken, then and not till then, should those pieces be rubbed with dry salt. The coarser pieces should be drawn and examined every fifth day at least, and if the salt should not have sufficiently stricken, and the impurities be not well extracted, then they should be *gently rubbed* a second time, and the air allowed to act for an hour or two at least, on the meat and salt, before they are returned into the brine; the whole of the meat in the curing tubs must be well covered with brine, and the air entirely excluded from it. Under a good state of the atmosphere, and with proper handling of the meat, it will be cured and ready to put into the tierces in from 14 to 16 days, but of this the practiced eye and hand of the tradesman can alone be the judge, for I know of no words to explain the feel and look of meat when cured, or when not sufficiently cured; practice and comparison alone, aided by close observation, is the only certain way of arriving at that judgment.

The propriety of sorting the meat of the three qualities as pointed out, and having each quality cured separately, I shall endeavor to explain, so as to be understood and appreciated by every person possessed of any common sense and experience. First, the finer or middle pieces of every animal, it is well known, are much more easily cured than the coarser pieces of the extremities of either the fore or hind quarter, hence the propriety of keeping them separate, as nine times out of ten it is wholly unnecessary to do more to them (the finer pieces,) than simply to place them in the brine, where they will cure without any rubbing, while it is necessary to rub the other pieces once at least, and sometimes oftener with dry salt, in order to extract thoroughly those impurities which the *lean* of every animal contains in a very much larger proportion, than the fatter part of the same animal does; and it is for the same reason, right and necessary, to separate the pieces cut off the extremity of the fore quarter from those cut off the extremity of the hind quarter, because the meat of the fore quarter contains more of those impurities, which must be extracted before it is cured, than does the meat of the hind quarter, and consequently the meat of the fore quarters requires more care and handling in order to cure it, than does the meat on any other part of the carcass of the animal; hence this classification will enable the curer to give to each sort of meat the required handling necessary for its preservation, without interfering with the other parts, which, if treated in the same way, (I now speak of the finer pieces,) would have their natural juices extracted, become hard, and what is commonly but erroneously called over-cured. There is also another reason why this classification should be made; it is this: That it saves much time and labor, when the meat is selecting for the scale, by having each quality in separate bulk; the selector has but to go to either, in order to lay his hand at once upon the particular piece he wants, without losing time or wasting labor in tossing over a pile of meat promiscuously cured.

When your meat is cured, the next process is the packing it away for preservation into the tierces, about which I deem it unnecessary to say anything; because when the meat is selected and scaled, the packing it is a mere mechanical process, in which a man can alone become a proficient by practice and experience. It may be well though to remark, that when your meat is taken out of the curing tubs, it should be washed, and ridded of the impurities extracted by the salt, and generally in a greater or less degree deposited on the surface, and which can be best and most easily done, with the aid of water and a good hickory broom; the packer should always have by him a knife, and whenever he observes an incrustation of those impurities on the meat, which the washing had not taken off, he should use his knife to scrape it off, and if scraping did not effect it, he should cut it off.

When your tierces are packed, they must then be headed and thoroughly driven down in their *wooden hoops*, rolled by, and each tierce have its bung hole bored, and then brined with pure, clean brine, made and tested in the way before described, except that *no saltpetre* should be put in it. It is of the utmost importance that this brine should be made several days before, in order that not only the impurities of the salt, but those of the water also, should have time to settle down into a sediment, and this sediment should not be disturbed when the brine is drawn off. The want of this precaution, has been the cause of much complaint, and injury to the meat when exposed for sale, from the fact that when the brine was put on without first being allowed to clear itself, the impurities of both the salt and the water settled upon the meat, and made it both slimy and dirty. The tierces should remain at least 14 days in this state with the bungs open, and whatever the casks may have absorbed of the brine, should be replenished once, if not twice every day, and this continued until the casks will absorb no more, and that the brine remains as stationary and undiminished, when filled, as though it stood in a glass bottle. The necessity for this precaution is obvious; first, if your staves are not in this way allowed to become saturated with brine, and the brine replenished, before the casks are finally coopered and shipped, you can have no guarantee for your casks not leaking on the voyage; and secondly, should this absorption be allowed to take place, on the voyage, your tierces in a short time will become half empty of brine, and wherever your meat then comes in contact with the stave, it will extract from the wood its coloring matter,—will become stained and discolored, and for the want of brine, the meat will become hard and rancid, and perhaps mouldy too. Your tierces after standing at least 14 days will take no more brine. They are then ready for the bungs, which should be put in with a coarse cloth around them, and tightly driven; over each bung a piece of tin should be nailed on, but great care must be observed that the tacks with which it is fastened are so short as not to go through the stave; as, if they do, a leakage will take place that may do much harm.

Then comes the finishing stroke to the whole, namely, the putting on of your iron hoops, and the final coopering of your tierce. As few coopers are in the habit of doing such work in the United States, I shall explain the process, so that all may understand, and perform it, if they will. In the first place, care should be taken to clear your house of all salt and brine, in order that the hoop iron may be kept as free from it as possible, to prevent its rust and corroding. The tierce up-ended, the cooper takes off the three first wooden chime hoops, he then takes his hoop iron and bends it round the place of the *first* hoop, and takes its accurate measure; there he then cuts it to the length, and rivets it, which can only be well done on the face of a small anvil, or on the side of a metal half-hundred weight; he then puts this hoop on, (having eased it, by a few blows on the inside of one edge, to the shape of the cask,) and drives it to the berth of the *second* wooden hoop, leaving room for a wooden guard-hoop on the outer edge of the chime; he then strips that end of the tierce of all the remainder of its wooden hoops, and takes his hoop-iron and measures around the berth of the *third* wooden bulge hoop, cuts, rivets, and shapes it, and then puts it on and drives it down, to the place of the *second* bulge hoop; this done, he then puts on his wooden guard bulge hoop, which passes over the iron one, and drives it to its place, and then drives on the remainder of his wooden hoops, finishing with a guard chime hoop outside the iron one, and so proceeds on until the whole is coopered. It is necessary here to remark, that no iron driver, used perpendicularly, as coopers use their wooden drivers on wooden hoops, will ever drive an iron hoop to its place. There is a proper driver without which the hoops cannot be driven; it is this:

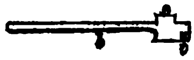


Fig. 106.

B, the handle; *a*, the head on which the blow is given, and *c*, the bite which catches the edge of the hoop; this used with a 7 lb. hammer to strike with, will drive any iron hoop to its place, but without it, the hoop cannot be stretched and driven, and consequently must remain imperfect.

The curing and packing of pork differs somewhat from that of beef, but the length to which this article already extends, prevents me from going into that subject at present, nor is it so necessary to be known to the community, for from my knowledge of the trade, of the quality of the Irish pork, and of the manner and cheapness with which it is produced, I deem it impossible for us in the United States to compete in any market with the Irish pork, with the hope of realizing a profit for some years to come under the present tariff; nor can we count with certainty, even under the very best possible management, upon any profit being realized by putting beef up for the British market this year, at the prices now paying for fat cattle in this, the great beef producing country of the United States.

At some future period I may again address you on this subject, which is of such interest and importance to the whole of our community here.

I remain sir, with respect, yours, &c.,
AN APPRENTICED PACKER.

Louisville, Ky, 4th Nov. 1845.

CRITICAL NOTICES.

EDITOR OF CULTIVATOR—I do not pretend that the mantle of "Commentator" has fallen upon my shoulders, yet I wish to make one or two remarks after his manner, on matters treated of in the Cultivator.

On page 292 of the current vol., you say. "We think common experience does not agree with Mr. Robey's remarks about the product of small potatoes, and cutting potatoes very small." It agrees most perfectly with mine. I have made many very carefully conducted experiments, by weight and measure, on various soils and at different seasons, and I have invariably found the product of a single eye equal to that from a large potatoe. You will find this result corroborated in one of your back volumes, by the experiments of D. S. Curtis.

There are some remarks on *garget*, in cows, on p. 284. I have never tried any thing to reduce the hardness and swelling of the bag, so certain in its results, as pigs' feet oil, well rubbed in.

D. C., on p. 309, objects to the decisions made by judges, at agricultural fairs, on the comparative merits of plows, with sole reference to the indications of the dynamometer, without taking into account the goodness of the work. This would indeed be a very erroneous method of judging; but the results of the dynamometer are exceedingly ambiguous on another account; that is, the speed with which the work is performed. The resistance to a solid, moving through a fluid, is proportional to the square of the velocity. Whether the same law holds in relation to the movement of a plow through the furrow, I believe has never been determined; but I know that a plow which marks 350, on the dynamometer, when drawn by a pair of slow cattle, will mark from 400 to 450 when drawn by a pair of smart horses. This fact, which is very seldom taken into account by judges, completely vitiates these experiments and awards.

N. N. D.

Stockport, Nov. 10, 1845.

WANT OF DEFINITENESS IN WRITERS.

L. Tucker, Esq.—Probably you and your readers have often heard of the good old lady's test of the quality of indigo. It being somewhat after this wise:—"Take considerable water—put it into a tolerably sized tub—and into this place a small piece of indigo. If the article was of the proper quality, it would sink—or swim—she had forgotton which."

Without intending disrespect, and, I hope without risking the charge of obtuseness, I must say, of a similar character to the above, is much of the information intended to be conveyed by the thousand receipts and the scores of informants of the present age.

Does the subject relate to matters of domestic economy, we have "a little spice," "a very little salt," "a small lump of butter," "a very little sugar," &c.

Are we to be made wiser in the details of agriculture or horticulture, we are told of "a part of an acre," so and so—"several loads of manure"—"a small quantity of plaster,"—"a few inches in depth,"—"a short distance apart," &c.

This constant use of *indefinite terms*, when communicating what is intended to be *definite information*, is exceedingly annoying to one desirous of instruction, and with the less enlightened, contributes as much as any one thing, to bring "book learning" and "book farming" into disrepute.

When a new or important fact is to be communicated, let it be done distinctly, *definitely*, so as to render it *practically* available.

When a novel or otherwise remarkable experiment is detailed, let the manner be such as will enable another person, in like circumstances, to repeat it in precisely the original manner; or if under different circumstances, to so modify it as to realize, if desirable, the same results.

The above was suggested by a perusal of an experiment with "guano for roses and grape vines," given by your correspondent, A. T., of Brooklyn, in the Nov. no. of the Cultivator.

According to his own account, the result was all that the most extravagant could have desired. I was pleased that his generosity prompted him to make you so *tastingly* sensible of its truth.

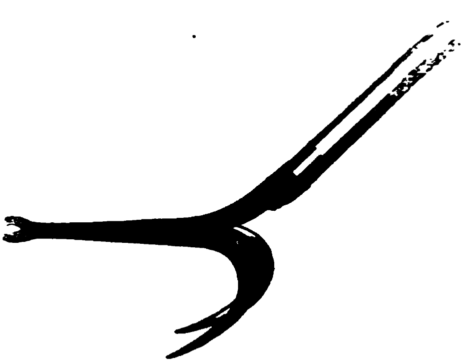
But how was it accomplished? Why, in the case of the rose bush, simply by digging "a portion" of a mixture of one part guano with four parts of earth, in about the roots." What portion of what quantity was thus dug in, or at what season the digging was performed, we are not advised. It might have been "a small portion of a considerable quantity," or the reverse; it might have been rather early in the season—or somewhat farther advanced.

As for the *one* grape vine, we are equally in the dark here too.

I am certainly much obliged to A. T. for his hint, for as it is given, it can hardly be called more than this; but, if he is correct in his impressions, I shall be under still greater obligations to him, if he will favor you with the *precise modus et tempus operandi*, in each particular case.

J. B. C.

Providence, R. I., Nov. 6, 1845.



ROOT CLAW.—(*Fig.* 107.)

Ed. Cultivator—One of your subscribers has made inquiries of you concerning a "root claw." Above is a drawing of one which I have used on my farm, and though simple, I find it quite an efficient instrument. The shank is about twenty inches long, and the teeth twelve. The socket where the handle enters is two inches in diameter. The handle three and one-half feet long, with a pin. The thickest part of the shank is about two inches square. The thickest part of the teeth 1¼ inches. I have used this claw for alders, willows, and bogs, and find it a valuable farming implement. You are at liberty to use this communication as you see fit.

Yours, respectfully, Daniel Gaylord.

N. B. The claw is a fine instrument to pull negro heads in the meadow.

Gaylord's Bridge, Ct., Nov. 1, 1845.

KENTUCKY—ITS FARMERS AND THEIR HOMES.

L. Tucker, Esq.—My protracted illness has prevented me fulfilling my promise, and writing to you on this most interesting subject ere this.

In order to prepare the reader for my plain pen and ink sketches, it may be well I should tell you an anecdote of the Duke of Wellington, when premier of England: He requested one of his old peninsular generals to take charge of the war department, and was answered by the veteran, that he felt his incompetency to fill the office, *only* from his inability to speak in public, and answer the questions necessarily put to him in Parliament. The Duke met him by saying, you will get along well, sir, if you follow my rule, which is, to speak in plain good English to the point in question, and avoid all attempts at embellishment by quoting Greek, Latin or poetry. Now, my situation is much the same as that of the old war officer; I feel my incompetency to write of the Kentucky farmers and their homes, *only* from the want of the "pencil" of a Willis to do it with; for no one is more sensible of their great worth, nor appreciates it more highly than I do, but I have to mourn over my inability to write of them, in other than *plain English*, unaided and unembellished by either poetry, Greek or Latin.

The old maxim of "green are the hills that are far away," does not hold good as regards Kentucky. Though much I had heard of its fine lands, its extensive and well managed farms, and their hospitable owners, the description fell far short of the reality, when I came to visit them. The lands are of the very first quality, yielding the heaviest crops of corn and hemp, year after year, without the slightest aid from manure. Where those crops are not growing, you find the *whole* of the remainder of the land well set in blue-grass; every inch of woodland throughout the country being cleared of the undergrowth, and set in this grass. Your eye rests on no land that is not producing either fine blue-grass, or some cultivated crop.

The hospitality of the farmers is hardly surpassed by the proverbially and prodigally hospitable Irish. You are greeted at every door by its gentlemanly owner, saying, "Alight, sir, walk in. Tom, or John, take this gen tleman's horse and feed him." If you call in the forenoon, there is no getting away till after dinner; if you call in the afternoon, you must certainly stay all night. Nor is this all. If the gentleman should be absent, the lady of the house makes her appearance, and without questioning you on your business, tells you at once, you must come in, be seated, and take some refreshments; that her husband will soon be home, and that you cannot leave until he comes. There is no resisting these appeals, they are made with such unaffected sincerity. You are entertained too as your taste may lead you, either in conversation, reading, (for they all have libraries to some extent,) or with music. In point of comforts, of luxuries, and even elegancies, the Kentucky farmer compares well with the English, Irish, or Scotch gentleman-farmer, *in every respect*. Their houses, generally speaking, have been built within the last 30 years; are of brick; well and tastefully planned; large and roomy; and if fault is to be found at all, they are too magnificently furnished for a "farmer's" residence. They all stand some distance from the road, and are approached by a wide avenue, shaded on either side with large forest trees, and the ground immediately surrounding the dwelling, is invariably tastefully laid out in shrubbery, ever greens, and flowers. Every farmer has his elegant family carriage, and his one horse buggy for himself, with horses and saddles innumerable, for the younger branches to use when their inclination leads them to gallop uncontrolled from one neighbor's house to the other. Were the young ladies of our cities to see the ease, the elegance, and the independence with which the Kentucky farmer's daughter mounts and rides her horse, I am persuaded that many city belles would soon be converted into a farmer's wife or daughter, and I will add, that the change would not only be a happy, but a most useful one.

"John Bull," in inquiring about any place, speaks first of the eating and drinking—though it is last in my catalogue, yet it is not the least in importance, nor the less interesting to your readers to know something about. Let me describe to you a Kentucky farm-house breakfast. Reader, I give you the catalogue just as I found it, nine times out of ten, on every table without any addition whatever:

The tea service of neat but elegant China, not unfrequently silver forks, and invariably a silver goblet laid by the side of every plate. Tea and coffee, the richest cream and butter in abundance, with a large pitcher of rich sweet milk on one side, and a like pitcher of fresh butter-milk on the other, covered with snow white napkins. *Hot* corn bread of two or three different kinds, *hot* biscuits, *hot* light bread, and *hot* cakes of two or three other kinds, made from I know not what or how, but they all taste admirably well; a dish of white maiden honey in the centre, surrounded by fried ham, fried chicken, and a beef-steak or mutton chops, supported in general with a dish of fine Irish potatoes, baked, and flanked by a bowl of fresh eggs, either poached or boiled. This for breakfast! Only think what you might expect for dinner or supper. No wonder, you will say, that the Kentuckians should be such a tall strapping race, when they live in this way; and so say I myself.

Having now spoken in general terms, I will descend to particulars, and endeavour to describe to you some of the finest farms, that are under the best management, in the state, and they are many. In doing so, I shall take them in the rotation that I visited them, and not make selections on account of the *name* or *public character* of the owners, but speak of them *all* as *farmers*, and as I really found them at their homes.

In my next letter I shall make this commencement; and will devote the few remaining lines of this sheet to a short notice of the husbandry of Mr. JOHN DAVIS, which is different to that of any other man in the state, so far as I have seen or been able to learn. He is a native of Switzerland, many years in this country, and was formerly a resident of Indiana, where, not many miles from Jeffersonville, he planted two tolerably extensive vineyards of the Catawba grape, and made a most superior wine, for which he got ready sale at $2 per gallon. Mr. JOHN L. MARTIN, of Jefferson co., induced him to sell out his vineyards in Indiana, and he has him now residing on his princely farm near Louisville, planting and cultivating an extensive vineyard there, of the Catawba grape, of some 20 acres or more, a large portion of which will bear this next year. The arrangement is very complete, and must be successful under such guidance. The vines are planted in rows, at distances of 8 feet and 10 feet apart between the rows; well cultivated and free from grass or weeds; the vines are being trained on a light standing frame, or trellis, and give the whole the appearance of a beautifully cultivated garden. The wine made from this grape, is of a fine, full, rich, and sweet flavor, and possesses a peculiar and invaluable qualification, namely, that it can be kept 4 years at least on tap (for Mr. Davis has tested it that long,) without injuring the wine in fullness of flavor, or risking its becoming sour in the least degree—a quality that I never knew or heard of any of the wines of Europe to possess.

A company has been formed amongst the most wealthy and influential farmers of Bourbon co., to import several Alpaca immediately, into this state. The shares are all taken and *the money paid in;* a man has been chosen, and an agreement made with him to start before Christmas to South America for them, so that within the next year you may count with certainty upon seeing this most interesting and important experiment tested in Kentucky, by Kentucky farmers, to an extent, and in a manner that must insure success, if our climate is at all suited to the constitution of this most valuable animal. Before I write to you again, I hope to see some of the company, and to be able in my next to give you a more detailed and particular account of this important movement.

Wishing you a Kentucty breakfast to feast on during the coming cold winter, I remain truly and respectfully yours, GRAZIER.

Social Hall, near Lexington, Ky., Nov. 1, 1845.

SHEEP HUSBANDRY.

L. TUCKER, Esq.—I have noticed many articles in your paper, headed "Heavy Fleeces—Fine Sheep." As I have been a wool-grower for the last thirty years, and have seldom, if ever, in that time, wintered less than 300, it seems not improper for me also, for once, to speak on this subject. I commenced early with half-blood merinos: and in 1822, I selected 20 ewes from a lot of full-blooded merinos in Watertown, Conn. About 1814, our late Chief Justice, R. Skinner, purchased a lot of full-blooded merinos, from his native county, Litchfield, Conn., then called the Humphrey sheep. In 1825, he purchased a Saxony buck. The scab got into his flock, and in his absence to the southern states, by neglect of good care, a large number of his flock of 500 died, and fortunately, some would say, his Saxony buck among the number. On his return, in 1827, I purchased his entire flock of ewes, about 150. I have bred from the full blooded merino since then, and mostly from bucks from Consul Jarvis' flock. I have had three bucks and a few ewes from the Shaker flock, Enfield, N. H.

My manner of improving my flock has been the following: No observing wool-grower can have failed to notice, that as great differences exist among sheep, as to the length, thickness, and fineness of wool, as of the hair of the cow. The first care of a good dairyman is to select his cows best for milk, quantity and quality. Build is a second object. By proper crossing of these selections, our best breeds of cattle are produced. I have had ewes apparently from the same original stock, one at three years old, producing but three pounds of wool, and a miserable lamb; another of the same age, and in the same order, shearing 5¼ lbs., and raising a good lamb. The fleece of the first will be short, thin, and of a rotten deadly appearance. The other, long, thick, and of fine, silky, lively appearance. This last I breed from as long as good keeping will enable me to. I have now a ewe 18 years old, with a likely lamb by her side, and another, 14 years old, that has raised a lamb this year with as much grain as both would eat, which at seven months old weighed 109 pounds. From a flock of 320, I select annually 100 for breeding, in the spring before shearing, two years old, and upwards. From this selection I mark 20 or 30 of those which have thick, long, fine wool, free from gum or jar, or any appearance of coarse wool or hair on the flank or tail. The female part of the increase of this selection are preserved; without this attention to marking the best ewes before shearing, the best of the flock will be disposed of after shearing. I give my 100 ewes six quarts of corn per day. My lambs seldom have any grain. The remainder of the flock have no grain. All are housed in the winter, and have access to good water and salt at all times. I have many ewes which from old age shear light fleeces. Yet my whole flock of over 300, yield 4 lbs. 4 ounces per head. I have no 10 to 13 lb. fleeces. My heaviest buck fleece, weighed 8½ lbs.

There is but little known as to the weight of wool from the weight of the fleece. I tried the experiment once upon two bucks. One weighed over 8 lbs., and the other 6½ lbs., both in the same order and washed alike. The largest fleece weighed after being cleansed, 3½ lbs., and the other 4 lbs. I do not believe a fine wooled sheep can be produced in Vermont, that will in one year yield 6 lbs. well cleansed wool. I hope your correspondents will send you the amount of the fleece well cleansed, and the price their wool brings this year. I sold my last year's clip the 8th of last March, and this year's clip last month. The average price of both clips is 39½ cents. During the last seven years it is as follows: My clip of 1842 and 1843 sold in 1843, at 34, 36, 43, 45, 46, and 70 cents.

If the wool-grower will look back to the prices of those years, he will find the tariff has had but little effect upon the prices. This jumping out and into ship at every session of Congress, is what ruins the wool-grower. He must expect ups and downs in prices; that is the lot of all. I fear not the west. The increase of sheep (fine sheep,) does not keep pace with the increase of population. Fine sheep never can survive the cold rains of the western prairies. Fine wool yields a better profit to the farmer even at this time than any other agricultural business. This is the first time I have spoken. Therefore please excuse my long yarn.

John S. Pettibone.

Manchester, Vermont, Oct. 28th, 1845.

IMPORTANCE OF WOOL DEPOTS.

Mr. Editor—I have been surprised to learn that the plan of a Wool Depot as established at Kinderhook, does not meet the approbation of many of the manufacturers. Why, I can hardly conceive.

Great injustice is done for the want of descrimination between fine and inferior grades. For years the fine wool-grower has struggled on under the delusive hope held out to him by the manufacturer of renumerating prices; but vain has been and will be that hope, unless some system is universally adopted, which shall cause this difference to be made, for the manufacturers frankly admit that they cannot buy from farm to farm and make it, because every man is prone to think his wool about as good as his neighbor's. Admit, for the sake of the argument that the manufacturers are honestly disposed to pay the grower all his wool is fairly worth to them, does the present system do justice? All must admit that it does not. Why? Because the manufacturer does not himself visit the grower to buy, but sends an agent who has no other interest than to buy the wool cheap enough, *upon the average*, to meet his employer's views. Every reader can call to mind numerous instances of reckless agents, buying with an utter want of discrimination, the only apparent rule being "buy as you can," but be sure and make the average low enough.

That the interest of the manufacturer and wool-grower should be identical all admit. How it is to be made so is the question? Of all the plans to accomplish this, that of *depots* seems to me to be the most feasible. Establish in localities where sufficient wool can be readily brought together, and of convenient access to the purchaser. What can be more just or equitable than for the wool-growers of a section to deposite their wool with a faithful and competent agent, to sell at the fair market price? As I understand the plan, a standard of quality is established; each lot is assorted by the fleece agreeable to such standard; the sorts are carefully weighed and entered in a memorandum-book; the lot is then placed by itself ready for the manufacturer, who can select such lots as suit. The value of each can be readily decided upon; the purchaser knows just what he is buying, and the grower gets the relative value of his wool, coarse or fine, be it high or low.

Another great advantage would eventually accrue to both manufacturer and grower. By a proper discrimination and price, the manufacturers could induce the growth of just the style and quality most desirable, while if the present system is continued, eventually nearly all the fine sheep will be superceded by those of middling grades, which pay better.

The wool-growing interest has become one scarcely inferior to any other in the Northern States, but has as yet been managed in a very loose way. Some good system should be adopted to effect equitable sales, and if a better one can be proposed than the one I am urging, I hope it will be, through the columns of the Cultivator.

I would also suggest that the wool-growers hold a convention in Albany during the coming winter, to discuss the subject and agree upon some plan for universal adoption. What say my brother wool-growers? Will you answer through the next Cultivator? Let us keep the "ball rolling" until some plan is devised to accomplish so desirable an object. A Wool-Grower.

CORN, APPLES AND POTATOES.

Mr. L. Tucker—Herewith I send you nine varieties of Indian corn—eight of Apples: the Pound Sweeting, two Sour Russets, the Honey Russet, the riches apple I ever tasted; the Bellflower, Spitzenburg, Seck-no-further, and Daniel apple. The two last, from grafts at eight years since. They are all winter apples, except the Daniel, which is scarce, growing only in two orchards to my knowledge. They are a first-rate apple, and stand at the top of the market in Utica.

I send also four varieties of Potatoes—the early and late Pink-eyes—the blue Pink-eye, and a variety of white, which I call "Yorkers." I wish you would try the blue pink-eye, and if you have any better variety, send me half a peck or so. I think my experience with potatoes shows the fallacy of the doctrine that potatoes run out. I have planted the pink-eyes for more than 20 years, and for nine years on the same farm.

Trenton, N. Y. Nov. 1845. Dairyman Farmer.

Our correspondent has our thanks for the articles above enumerated. They are fine specimens, and may be seen at our office. We will test the potatoe, but if we have any better, shall not be able to send them, unless Dairyman Farmer will give us his name.—Ed.

TO KILL RATS.

Mr. L. Tucker—A subscriber in your last Cultivator, requests the best manner of destroying rats. The following methods of destroying them, I copy from a very good work, entitled the "Vermin Destroyer," which may be of some service to your inquirer. Although I have abbreviated the description, it does not destroy its efficacy:

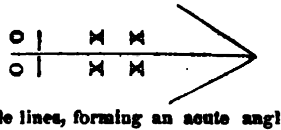
Take an old fashioned wire trap in good order, smear the floor over with the oils of anniseed, carraway, and rhodium. This latter oil is very expensive and of a strong scent, therefore a very little of it should be used. Mix with them for bait, a few drops of the carraway oil, and set the trap for use. The scent of these oils will allure the rats into almost any kind of trap. Or by taking a handful of newly ground malt, mixed with a handful of good sweet oatmeal, and an ounce of arsenic made up into pills and thrown into their holes, is a very effectual remedy. Care must be taken not place them in the way of poultry. If too much arsenic is used it will not kill them; it will only make them vomit up the poison. Many persons have found that a genuine Scotch *slut* terrier is first rate for giving the above vermin their quietus. The sluts are considered far superior to the dogs for the business. Ratology.

Albany, Nov. 5, 1845.

FACTS AND OPINIONS,

Condensed from various Exchange Papers.

Snow-plow.—The European correspondent of the Boston Courier, gives an account of a machine to remove snow from highways and railroads, used in Dresden, which ingenious yankees will soon have an opportunity of employing and improving upon, if they wish. It literally puts "the cart before the horse." It is represented by the following diagram:—



The outside lines, forming an acute angle, represent the form of the shovel or snow-plow, the long straight line in the middle, is the pole; the oxen are placed at the points X X, and two men at the points O O, to steady it; it is pushed, not drawn, by the harness, ropes, or chains attached to the oxen and fastened to the hinder extremity of the pole, near O O. It will be perceived that a road is made for the team and men, and that they are not annoyed by travelling in the snow drift. Who will make one forthwith and try it this winter? Any force, by way of ox-team, may be attached to it, and the heaviest snow drifts riven asunder.

Wheat—heavy crop.—S. M. Brown, of Elbridge, Onondaga Co., N. Y., harvested over 400 bushels of fine white flint wheat, from eight acres, the present season. He ascribes a part of his success to a dressing of three bushels of salt per acre. Single experiments, however, are as a matter of course, insufficient to determine points of this nature.

Successful experiment with grass seeding.—A New-Jersey correspondent of the New-York Far. and Mechanic, states the following experiment:—He first procured, from different sources, sixty loads of muck, and rotted leaves from the woods; it was exposed to the frosts of winter, and the rain and sun of summer, till after midsummer, when three hogsheads of unslaked lime were mixed with it. When properly heated, it was put on three acres of turf ground, which had been newly turned over, and rolled down. The manure was well harrowed in, rye and grass seed were sown, and the land again well harrowed and rolled. The subsequent product was two tons of hay to the acre, where previously not half a ton was cut. This affords another proof of the great advantage of the thorough intermixture of the manure with the soil. Thorough and repeated harrowing should always be given immediately after spreading manure, even where it is intended to turn it under with the plow.

Grinding horse food.—The London Ag. Gazette states that two horses, every way equal, were allowed each five lbs. of oats daily, and enough hay, amounting to about 17 lbs. per day. For one horse the oats were crushed, for the other, not. 100 parts of the dung of each horse were examined chemically on the fourth day; that from the horse fed on crushed oats contained no nutritive matter, but merely woody fibre, mixed with secretions and salts. In that from the other horse, one quarter per cent of nutritive matter, consisting of starch and gluten was found—arising from the inability of the horse to perform perfect mastication, and which must vary with age and rapidity of feeding. No difference was found in the dung from chopped and unchopped hay, though the ease of eating the latter and consequently greater rest obtained, was a decided advantage.

Fatting Swine.—There is sound sense in the following, taken from an old work, called "Countrie Farm." The more quiet and comfortable hogs are kept, the more rapidly will they take on fat;—"The hogs which you intend to keep in and to fat, shall not come forth at their stye, being alone and free from others, nither shall they have any light but at the door, which is made to go in at, for to dress them. The care about these is not so great as other cattle, excepted only the keeping of them clean, and knowing how to make them good meat, so long as until they are fat, for after that they will lose every day some of their meat, for they are sometimes seen to heap such quantities of fat upon their live flesh, as that there are some hogs found a foot and a half thick of lard."

Golden Russet.—The Indiana Farmer and Gardener, speaking of the popularity of the Golden Russet, (described by Downing as the American Golden Russet, and known also by the name of Bullock's Pippin,) says, "A gentlemen near Belfre, Ohio, being applied to for a list of apples to furnish an orchard of a thousand trees for marketing purposes, replied, "take 999 Golden Russets, and the rest you can choose to suit yourself." [For an account of this apple see Downing's work on Fruit.]

Preserving Cut Flowers.—By changing the water once a day, and putting in a few grains of nitrate of soda, at each change, the beauty and brilliancy of cut flowers may be preserved a long time. Nitrate of potash (nitre or saltpetre) is nearly as good as nitrate of soda. A very weak solution of carbonate of ammonia would doubtless have a fine effect.

Draining.—A very thorough and successful experiment is described by E. Stabler, in the Rockville (Md.) Reporter. A piece of ground was completely worn out when purchased; a part was like mortar in spring, and baked like brick in summer. An unsuccessful attempt was made at draining. "Meeting" says he, "an able essay on draining in the Cultivator or Farmer's Cabinet, I concluded to make another effort. A heavy coating of lime was put on, but the crop of corn was not over 15 bushels per acre. From 500 to 600 yards of surface and under-drains were then made, and oats sown. "The increased crops of oats nearly paid for both the lime and the drains. Four years since, in the then state of the land, it would not have produced more than five bushels of wheat to the acre; now it is light and mellow, and will most likely produce an increase in grass of four or five to one. It is not a very difficult problem to solve, whether there has been a loss or gain in the transaction; when a single dollar for a year's subscription to an agricultural journal, should suggest the idea for improvement, by which land that did not formerly produce over five or ten bushels, will now yield thirty or forty bushels to the acre."

Produce from a single acre.—Henry Colman, in his his account of the market gardens about London, gives the following as the amount actually produced in one year from a single acre by a market gardener, the success being mainly attributed to trenching, heavy manuring, and rotation, besides the usual course of good cultivation:—

Radishes,	£10
Cauliflower,	60
Cabbages,	30
Celery, 1st crop,	50
" 2d "	40
Endive,	30
	£220—$1,100.

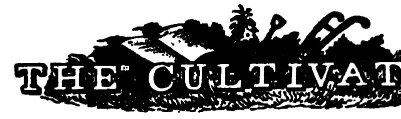
Pickling Eggs—as done in Hampshire, England.—When the eggs are plenty, take from four to six dozen, newly laid, and boil them hard. Then remove the shells, and placing them in a large mouthed earthen jar, pour upon them scalded vinegar, well seasoned with whole pepper, alspice, ginger, and a few cloves of garlic. When cold, the jars are closed, and in a month or more afterwards the pickles are fit for use.

Working Oxen.—At the late Northampton (Mass.) Cattle Show there were three trains of Oxen entered for the premiums. The train from Hadley was the largest, and comprised fifty pairs. The train from Goshen numbered 22 pairs; that from Southampton numbered 20 pairs. There were ten other yoke of fine oxen from different towns. These in all make 102 pairs, or 204 oxen.

Consumption of Guano in Great Britain.—

In 1841,	500 tons.
" 1842,	2,000 "
" 1843,	5,000 "
" 1844,	26,000 "

and from 1st July, 1844 to 1st July, 1845, the enormous amount of 257,000 tons.



THE CULTIVATOR.

ALBANY, DECEMBER, 1845.

CLOSE OF THE VOLUME.

With this number of "The Cultivator," we arrive at the termination of another year's labors. With the manner in which the duty on our part has been executed, we must leave our readers to judge; but if untiring exertions and ceaseless labor are attended with success, then we have certainly not labored in vain. It is with great satisfaction that we refer to the able assistance we have received in the shape of correspondence. More than three hundred persons have lent us their aid, nearly all of them highly intelligent practical farmers, and many of them well known for their agricultural and scientific experience. That the combination of ability which has been brought to bear in carrying on our paper, has been appreciated, we have the most gratifying testimony in the hearty expressions of approbation we are constantly receiving from every section of the country, and in the liberal and unprecedented circulation of our paper. To those correspondents, who have thus contributed so much to its substantial value; and to Agents, Editors, and others, who have essentially assisted us in placing it before the farming community, we are under strong obligations, and tender them our cordial thanks; and we invite earnestly their co-operation for the future.

By unremitting exertion, and the prospect of extensive and continued assistance for the future, we hope to render the paper at least equal in every respect to the past, and confidently expect the high character it has hitherto enjoyed will be fully sustained. In these labors the editor will be assisted as during the last year, by **Sanford Howard** and **J. J. Thomas**; and it is believed that with our extensive means for agricultural intelligence, we shall be able to embody in our next volume, an amount of information which will be every way acceptable to our readers.

☞ The subscribers to "The Cultivator," should remember that all subscriptions are discontinued at the end of each year; and consequently that this will be the last paper they will receive until their subscriptions are renewed.

TO CORRESPONDENTS.

Communications have been received since our last, from Truth, Dairyman Farmer, Wm. R. Prince, A Subscriber, T. & J. Hardy, J. S. Pettibone, C. Smith, C. N. Bement, Daniel Gaylord, An Apprenticed Packer, Ratology, J. B. C., Grazier, Highlander, N. N. D., A Subscriber, A Farmer of Tompkins, A Young Planter, J. D. F., W. Bacon, A Wool-Grower, J. Townsend, Wm. Mackinster, Farmer C., L. Durand, R. H. Ostrander, Samuel Bradhurst, Geo. Geddes, S. S. G., E. V. W. Dox, Noyes Darling, Farmer, J. W. S., Philip Short, J. R. Fuller, D. G. Mitchell.

We are indebted to A. J. Downing & Co., Newburgh,—J. L. L. F. Warren, Boston—Elwanger & Barry, Rochester—W. R. Prince & Co., Flushing, and Thomas Hancock, Burlington, N. J., for new Catalogues of their Nurseries—To J. L. Roche, Wilmington, for Transactions of the New-Castle Ag. Society—to A. D. Phelps, Boston, for Mr. Teschemacker's Essay on Guano—to Dr. Thompson, for David Thomas' Address to the Aurora Hort. Society—to the American Institute, for copies of several Addresses and reports, made during their late exhibition.

☞ We tender our thanks to numerous friends who have forwarded us papers containing accounts of Agricultural Exhibitions, Addresses, &c. Though we may not be able to make immediate use of them, we are always glad to receive them, as we frequently heve occasion to refer to them.

☞ We are indebted to **Wm. Makinster**, Esq., for a copy of the doings of the Middlesex county (Conn.) Ag. Society, and the reports in reference to the last exhibition of that society. They show that spirited efforts are making in that county for the improvement of the various departments of agriculture and horticulture. We are obliged, for want of room to restrict our notice to this small space.

South Down Mutton.—We acknowledge the receipt of a fine carcass of South Down Mutton from **James Lenox**, Esq., of New-York. It was bred and fattened at Mr. Lenox's farm, **Netherwood**, Dutchess county. We have, together with some of our friends, tested the quality of this mutton, which is unhesitatingly pronounced of very superior flavor—fully sustaining in this respect the high reputation which the South Down bears among epicures.

Wool-Growing.—We invite the attention of those engaged in this business, to the communication of "A Wool-Grower," published in this paper. The subject discussed, is one of great importance, and should receive the careful attention of those especially who are engaged in the production of the better grades of wool, whether for fineness or superior combing qualities.

AGENTS FOR THE CULTIVATOR.

We publish this month, a list of Agents for the Cultivator, on a sheet with the Index and Title-page. It is hardly possible to avoid more or less errors in such a list. Some names may be omitted, and others may be inserted which ought to be omitted. We hope, however, that no one disposed to aid in the circulation of our paper, will fail to act as Agent because he does not find his name in the list.

An edition of the Cultivator is published in colored covers and stitched, for those who do not receive their papers through the post-office. This edition is not sent by mail on account of the extra postage the stitching and covering would occasion. It is sent by Express to the following Agents, and we would recommend to all our subscribers living in the vicinity of the places named below, to renew their subscriptions with these Agents.

Auburn—J. C. Derby & Co., Booksellers.
Boston, Mass.—A. D. Phelps, 124 Wash.-st.
Dr. E. Wight, Druggist, 7 Custom H. st.
Buffalo, N. Y.—T. S. Hawks, News-office.
Geneva, N. Y.—G. H. Derby & Co., Booksellers.
Lynn, Mass.—Samuel Farrington.
New-York City—M. H. Newman, 199 Broadway.
New-Haven, Ct.—G. N. Seagrave, Seedsman.
Northampton, Mass.—Harvey Kirkland.
Owego, N. Y.—G. J. Pumpelly.
Philadelphia, Pa.—G. B. Zieber & Co., Booksellers.
Providence, R. I.—A. H. Stilwell, Bookseller.
Portsmouth, N. H.—N. March, Bookseller.
Rome, N. Y.—A. L. Johnson.
Rochester, N. Y.—D M. Dewey, News office.
Springfield, Mass.—D. C. Brewer.
W. D. Brown.
Schenectady, N. Y.—W. E. Russell.
Syracuse, N. Y.—Stoddard & Babcock, Booksellers.
L. W. Hall, Bookseller.
Salem, N. Y.—W. B. Harkness.
Troy, N. Y.—S. Willard, News office.
B. H. Boynton.
Wilmington, Del.—Jas. L. Roche, Post-office.
Worcester Mass.—Ruggles, Nourse & Mason.

"TRANSACTIONS OF THE STATE AG. SOCIETY."

The Editor of the Cultivator trusts that his readers will excuse him for the space he finds it necessary to occupy with matters which may, by some, be deemed of a personal character. In the present instance, however, justice to the State Ag. Society, as well as to himself, requires that he should brand with the infamy it deserves, an article in the last no. of the American Agriculturist. This article occupies a page and a half of that paper, and is filled with statements which, so far as they are derogatory to the State Society or to himself, are without the least shadow of foundation in fact; and while the editor denies the whole of these statements in gross, he will give a specific contradiction to such as he deems most pernicious in their tendency.

1. After detailing a "varied combination of men and circumstances, pointing all to the Cultivator," this libeller proceeds to charge the basest corruption on the part of the editor of this paper, in the words following:

> "I am aware that the Editor of the Cultivator received no salary of the State Society as Recording Secretary. If he has received no compensation *indirectly*, his labors have been *highly disinterested!* He asserts that "all his labors in behalf of the Society for three years were bestowed without fee or reward." He himself here makes a new issue. Let me ask if he did not receive $1,000, or a sum nearly equivalent to this, for *merely reading* the proof sheets of the Transactions of the Society for last year? If he did not, it is strange, for he himself is the authority for it. When urging that the Transactions should be sent to the Senate he remarked to a fellow-Executive-Committee-man, who desired the report to go to the House, that its being sent to the Senate would benefit him (the Editor of the Cultivator) a thousand dollars. Was not that $1,000 received from Mr. Van Benthuysen for reading proofs? If so, were not his official position and the patronage of the Society used to assist the Cultivator or its editor?"

The charge here is, taken in connection with the preceding part of the article, that the editor of this paper received from Mr. Van Benthuysen, the sum of one thousand dollars for his influence in causing the Transactions to be sent to the Senate printer. Now that he may not be accused of any evasion, the Editor of the Cultivator assures the public that he never received from Mr. Van Benthuysen, or any other person or persons, the sum of $1000, nor any other sum whatever, for reading proof sheets, or for any service or assistance whatever connected with the Transactions or any other business of the State Ag. Society.

To add to the atrocity of this libel, it will be seen that the writer says that "he himself [the editor of the Cultivator] is the authority for it," and further that "he remarked to a fellow-Executive-Committee-man, that its [the Report of the State Society] being sent to the Senate would benefit him (the editor of the Cultivator) a thousand dollars." That any other person than the writer of this article, ever made these assertions, the editor of the Cultivator does not believe; but by whomsoever made, he pronounces both assertions entirely destitute of truth. He never said that he had received, or was to receive, or that it would be in any way one copper's pecuniary benefit to him to have the Report sent to the Senate instead of the House. What he said, (and this he said not to a single committee-man, but to all the Committee while in session,) was, that it would be a personal convenience to him, as he had to read the proof-sheets and superintend the printing, to have it sent to the Senate inasmuch as the Senate printing was executed at the same office where his paper was printed.

2. The writer in the Agriculturist next asserts as follows:

> "Again: his friends have asserted that the position of Recording Secretary alone brought 1500 subscribers to the Cultivator. If his friends knew this, he was undoubtedly the source of their knowledge. Then his service is indeed *disinterested!* Better that there should be a "*fee and reward*," for then there might not be a perversion of official patronage to pay for labor that apparently was done of mere good will. The evidence that his friends (in interest, if nothing else) have urged that he should be Secretary to benefit the Cultivator is *not verbal*, and is in possession, and can be produced at once if it be necessary."

That the position of Rec. Sec'y to the Society brought 1500, or any other number of subscribers to the Cultivator, the editor of the Cultivator never believed. On the contrary, he always supposed that, by drawing so large a portion of his time and attention from his own business, it was an injury to the circulation of his paper; and he confidently believes that had he devoted the time and energy which he gave to the Society, to his paper, its circulation would have been much larger than it was. Of the sincerity of this conviction, sufficient proof may be found in the fact that feeling sensible that he could not longer afford to hold the "position of Rec. Sec'y," he positively declined a re-election in 1844. He was however re-elected, and most strenuously urged to accept it; but, feeling that the Society did not need his services so much as his own business did, he felt himself compelled, despite the urgent solicitation of gentlemen from every section of the State represented at the annual meeting, to decline the appointment. If, as the writer pretends, he has any evidence that the appointment of the editor of the Cultivator, has been urged "to benefit the Cultivator," he is invited to make it public. If such arguments have been used, it was unbeknown to him. So far as he knows, no such arguments have been urged or were needed, the appointment having been made with entire unanimity, and entirely unsolicited and undesired by him.

It is well known that the editor of the Cultivator did not desire the appointment, which was again conferred on him at the last annual meeting of the Society. He consented to it, with much reluctance; and only on the consideration that he should, this year, receive such pay for his services as should be deemed reasonable, and his salary was accordingly fixed at $300. He felt that he could not afford, and that there was no occasion for his doing the labor, as heretofore, for nothing. He has already stated to several of his friends that he could not accept the appointment another year on account of the addition it made to his labors, which are already sufficiently onerous; but circumstances may now render it acceptable to him, as he would not wish to retire from it, until the facts in relation to these charges, are fully made known.

3. A third charge which this defamer brings against the Editor of the Cultivator, is in these words:—

> "A curious part of this whole system of no 'fee or reward,' was witnessed at Albany last winter. A bill was introduced into the House, directing every County Superintendant of Common Schools in the State, to subscribe for as many copies of the Cultivator as there were school districts in their counties. The subscription and postage to be paid by the State out of the school funds. And how was all this to be effected? By these very relations; by the exercise of that influence which springs from the possession of executive patronage. The committee of the House, to which the bill was referred, reported it back and advocated its passage; and every man who stood in a position to the Cultivator of either interest or *indefinite friendly relations*, was found urging it in the lobby or the House. However, the good sense of the House killed the bill. This, if it had passed, would have given 12,000 additional subscribers to the Cultivator, with the pay certain, and subject to no commission. This was a '*fee and reward*' worth working for, and evinced a most decided *disinterestedness!*"

In reply to this heinous offence, the editor has only to say, that the bill alluded to, for supplying each school district with a copy of the Cultivator, was introduced into the Legislature by Mr. Danforth, of Jefferson county, a gentleman with whom he had never spoken, or had any communication either directly or indirectly, and the first intimation he had of the bill was derived from the report of the legislative proceedings in the newspapers. He then called on Mr. Danforth, who expressed a strong desire to have the bill passed, declaring his belief that its provisions would confer more benefit on the School Districts, than an equal sum appropriated in any other way. After thanking Mr. D. for the very flattering estimate he placed on the Cultivator, the editor expressed to him his conviction that it would be impolitic to urge the passage of the bill, as it would at least look like favoritism to one of the three agricultural papers of the state, and might excite their hostility; and that, so far as he was concerned, he preferred the matter should be dropped. This opinion he expressed to every one with whom he spoke upon the subject; and if any one, either in the Legislature or out of it, urged its passage, it was done without his solicitation or knowledge. For the evidence afforded of the high estimation placed on the Cultivator, by the introduction of this bill, and its passage being advocated by a committee of the legislature, if such was the fact, the editor is truly grateful; but he knows no rule of ethics by which he can be justly censured for the approbation which the public are pleased to bestow upon his labors.

It would seem that the writer in the Agriculturist intends to have *something* wrong understood by the repetition and italicising of the phrase "*indefinite friendly relations*," but what that something is, or what is intended by the use of the phrase, is beyond his conception, as he knows of nothing criminal in any of his friendly relations, whether definite or indefinite.

Having given his positive and unequivocal denial to these charges in all their length and breadth, the editor of the Cultivator trusts that he will be pardoned for adding, that for the four years, (1840, 1, 2, and 3,) that he was Secretary, so strong was his desire to do all in his power to place the Society upon a sound and stable footing, that he devoted himself most untiringly to its interests—finding a room for its Committee meetings, furnishing the stationery necessary—preparing the vols. of Transactions, reading the proof-sheets, and attending to the distribution of the vols. when printed, without any other "fee or reward," either directly or indirectly, than the consciousness that he was thus essentially benefiting the great interest of agriculture, to which he has devoted a large portion of his time for the last 15 years. In addition to his services, the actual expenses he incurred on behalf of the Society, and which he paid out of his own pocket, averaged from $50 to $100 per annum.

That he was not paid *directly* for these services, was not because the Society was not willing to pay him, but because he did not wish to be paid, his only object being to aid the Society. That he received no benefit from the Society in an *indirect* manner, was because he positively refused it. The Executive Committee proposed to make the Cultivator its official organ, to authorize the publication of its correspondence therein, and would have done it, had not the editor himself objected to it, which he did for the reason that it might be expected to create unpleasant feelings on the part of those interested in the publication of other similar journals in the state. For the same reason, he has repeatedly refused to second resolutions which have several times been made to give volumes of the Cultivator as premiums. Even at the last State Fair at Utica, several vols. of the Cultivator were awarded by viewing committees as premiums; but to prevent all cause for jealousy, the Editor called the attention of the President of the Society to the fact, and requested his assent to an alteration of the award so as to read vols. of the Society's Transactions instead of vols. of the Cultivator. Thus careful has he been, in every instance, where any thing has come up that would look like favoritism to the Cultivator, to prevent even "the appearance of evil," and he defies any one to point to an instance where he has received either directly or indirectly, even one cent for labors "professedly bestowed without fee or reward." To the truth of the statement here given, he ventures to say that every member of the Executive Committee, who was in the habit of attending the meetings frequently enough to make himself acquainted with the facts, will bear testimony.

Having thus shown that there was not a shadow of foundation for these charges, is it using too strong language to pronounce the utterrer of them an infamous slanderer? That his infamy may be proved, and the brand officially placed upon his forehead, the editor of the Cultivator has directed his counsel to demand the name of the writer of the article, that he may be prosecuted for the libel; and if the name of the author is refused, he will hold the editor and publisher of the Agriculturist responsible. He will also demand of the Society, as alike due to it and to himself, that it appoint a committee thoroughly to investigate these charges, that their entire groundlessness may be shown on the most competent testimony.

There are some other things in the article to which we have alluded above, which require notice. The first is in relation to the cost of printing the Society's Transactions. The price of legislative printing is fixed by law, and consequently it did not make a particle of difference as to cost, whether the Report was sent to the Senate or to the House. The writer states that the amount "paid to the printer to the Senate for it, was about $7,000," and that "the profit on it, was stated to him by a printer, at $2,000." This would leave $5,000 as the price for the work, after deducting the profits. Now it so happens that the exact sum paid to the printer to the Senate for the work, was $4,329.13, being $670.87 less than this veracious writer puts the actual cost of the work.

In a previous paper this same writer charged that Mr. Thomas, who condensed the papers for the last vol. of Transactions, had omitted articles from others to make room for his own. The falsity of this having been shown, he now charges in effect that the premiums have been awarded by the Executive Committee, through favoritism to Mr. T. It is, therefore, proper to say, what this writer must have known, that the premiums on the three essays of Mr. Thomas, were awarded by three different sub-committees, of one of which Mr. JOHNSON, the present President of the Society, was chairman; of another, R. L. PELL, Esq., of New-York, and of the third, *H. S. Randall* of Cortland.

It would be an insult both to the Society and common sense to reply to the assertions respecting the management of the Society being under the control of the Cultivator. A mere reference to the names of the officers is a sufficient contradiction of this ridiculous charge. That we have possessed the confidence, so far as we know, of all the officers, during the years of our connection with the Society, is to us a matter of gratulation; but that we have in any way abused it, remains to be shown.

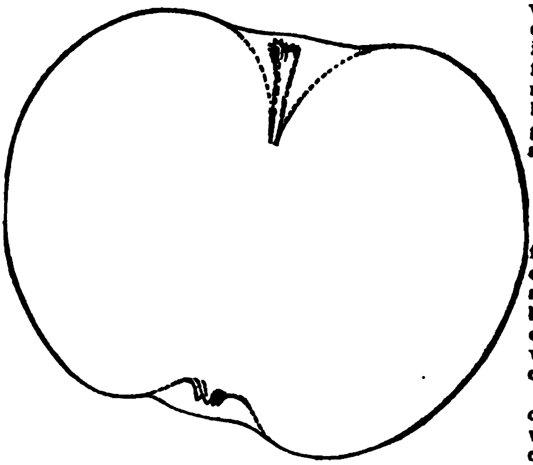
PERMANENCE OF LIME AS MANURE.

J. Watson, in the Journal of the English Agricultural Society, states that a piece of ground containing 166 acres, on which little grew except heath, was more than doubled in value, by a good dressing of lime, applied on the top sward. This was done about 15 years ago, and totally eradicated the heath. "The *lime to this day appears in full action*, as its effects annually testify, from the richness and sweetness of the herbage, the texture of which has been thoroughly changed by the action of the lime. The deep green hue and luxuriant appearance of this land in spring and autumn, form a striking contrast with those adjoining, which are still unimproved. The soil is a thin moorish loam in a high climate, resting on the greywack formation."

BENEFITS OF AGRICULTURAL SOCIETIES.

Dr. J. W. THOMSON, who has been either secretary or president of the New-Castle (Del.) Ag. Society, from its organization ten years since, in resigning the latter station at a recent meeting, among other things, said—"A county, for which nature has done so much, would, in all human probability, without their example and exertions, have gone on in her "old paths and accustomed ways." But, when all see and appreciate the rapid and improving state of her agriculture; in ten years, *doubling her crops*, and adding, as estimated, more than *a million of dollars* to the value of her stock and real estate, they must say that the progress of your Society is "*onward*;" and its success has been as complete as its benefits have been widely diffused." A vote of thanks to Dr. T. "for his devoted exertions for the benefit and prosperity of the society during the eight years of his presidency," was unanimously adopted,—a tribute most justly due to his untiring efforts in favor of agricultural improvement. James Canby, Esq. was then elected President; C. P. Holcomb, Cor. Sec'y; James Webb, Rec. Sec'y; also ten vice-presidents, board of directors, &c.

DISEASED POTATOES.—Accounts from England as well as from the continent, speak of the serious damage to the potatoe crop by disease. The London Examiner says, "Externally the disease indicates itself by a moss, or fungus, producing a decomposition of the farinaceous interior."



COMSTOCK'S GARDEN APPLE.—Fig. 105.

It is generally supposed that for *culinary* purposes, fruit of inferior quality will answer; hence we see in works on pomology, and in nursery catalogues, the division into *table* and *kitchen* varieties. This distinction is founded partly at least, in error. The finest apples before cooking, are usually the finest afterwards. Our best and richest table apples are incomparably better for stewing, than ninety-nine hundredths of the "natural" fruit with which many orchards abound, which might be classed as from fourth to tenth rate, and being unfit for eating in hand, is turned off for purposes of cider or for cooking. It is true, that with a heavy admixture of sugar and spices, the deficiency in flavor is supplied, and the intense sourness is disguised; but the amount of these ingredients required, thus to make bad apples good is usually far more in cost than the price of the best-flavored fruit. We have found it much more economical to purchase Fall Pippins for stewing at thirty to forty cents per bushel, than inferior varieties at a few cents only. An experienced housekeeper estimates the quantity of apples needed to supply a common-sized family for a year at thirty bushels; and that eight pounds of sugar at least, would be needed to sweeten even toleraby, a bushel of common "cooking" apples. This would amount to two hundred and forty pounds of sugar for the thirty bushels,—which at eight cents per pound, a low average, would be *twenty-two dollars*. The fruit, at ten cents per bushel, would be three dollars, making twenty-five dollars in all. Now we have found from ample experience, that the Fall Pippin is quite as good, when stewed without sugar, as most of these are well sweetened. So that the actual cost of the ten-cent apples when cooked, is eighty-three cents per bushel; and it would conseqently be as cheap to buy Fall Pippins for this sum as the others at a very low price. We have lately, however, met with a new variety, decidedly superior to the Fall Pippin for this purpose. The two sorts were stewed without sugar or spices; and the dishes, side by side, examined by several competent judges, who were decided and unanimous in giving the decided preference to the new apple.

It appears to have been first cultivated by Nathan Comstock, in the neighborhood of Palmyra, N. Y., who afterwards removed to Lockport, and where only the variety appears now to be known, and where it is called the "Garden Apple." The following is a description, which, with the above figure, was taken accurately from the average of a number of only moderately sized specimens.

Fruit medial size, flattish, sometimes inclining to oblong; the whole surface covered with narrow streaks of light and dark red, nearly a uniform dark red in the sun, and marked with numerous conspicuous light colored dots. Stem slender, usually about half an inch long, variable; set in an even round cavity. Calyx nearly closed, in a moderate slightly furrowed basin. Flesh very strongly tinged with red nearly to the core, and especially at the blossom end; tender, but never becoming decidedly mellow, and rather dry; hence it is not a first rate table fruit, but superlatively fine for stewing, no sugar being required, and the delicate aromatic flavor being equal to the most skilful spicing. The tree is a good bearer, and the fruit always fair. It ripens through autumn.

ROOT PRUNING.

The practice of pruning the roots of rapidly growing fruit trees, to lessen their luxuriance, and as a necessary consequence, to increase their fruitfulness, is known to some of our readers; but it can hardly be said to have been fairly tried as yet in this country. As late autumn or early winter is the usual season of the year for doing the work, a few suggestions in relation, may not be unacceptable.

New things should be neither hastily rejected nor incautiously adopted. Root pruning in some instances will doubtless be found of great advantage. In ordinary cases, and with most varieties of fruit, the tree will come into bearing quite as early without pruning, as is consistent with its due growth and ultimate productiveness. It has been remarked however, in relation to some of the old pears, that

> "He who plants pears,
> Plants for his heirs;

out on the other hand, we have known numerous cases with many other varieties, where the trees were in free bearing when only a few years old. Hence a proper discrimination must be used. Trees naturally productive while young, will not need it; but some other sorts, as for instance the Autumn Bergamot, which we have known to stand and grow fifteen years without yielding a solitary fruit, would doubtless be greatly benefited. It should be more cautiously applied to varieties of slow growth, than to those of natural luxuriance.

T. Rivers, an English nurseryman, near London, has practiced it extensively for the purpose of bringing new or untried varieties early into bearing in order to test their quality or genuineness, in the same way that dwarfing by grafting on slow-growing stocks is elsewhere adopted. It has this advantage however, over the method of dwarfing, that while the growth of the latter cannot be controlled except by good or bad culture, and the trees must ever remain dwarfs,—by applying root-pruning merely, with greater or less degrees of severity, or with different degrees of frequency as regards time, any extent of dwarfing or fruitfulness may be produced, or may after a time be wholly relinquished. Some varieties of the pear are found to exist but few years when dwarfed by grafting on the quince; such would be far better if treated by pruning the roots.

Nurseryman who have had occasion to remove large-sized trees in the nursery two or three times, have observed the diminished growth resulting from the operation, and often the early fruitfulness of the trees. By a process entirely similar, Rivers succeeded in throwing his standard trees into early bearing, with the difference, however, of suffering the trees to stand unmoved, and cutting off all the roots, if the trees be small, or nearly all if they be large, at a proper distance from the centre of the tree. This distance was usually at first about ten inches; the second time fourteen inches, the third eighteen, and each subsequent pruning at about the same; thus preserving the dwarf form, so that pears and apples would not occupy more than six feet square for each tree. The work was done by a sharp steel spade, digging a trench round the tree eighteen inches deep, and cutting off the side and bottom roots. The operation is usually repeated every second or third year, while the tree is young, the frequency to be influenced by the growth the trees make, which should be six or eight inches long at least, the season preceding the pruning. If they should be stunted, a greater interval is to be allowed for their recovery. The vigor of the trees is kept up by an abundant application of manure in the trenches, made for cutting off the roots.

This practice has been recommended as possessing the advantage of placing many bearing trees on a small piece of ground, which might be valuable in towns and villages; and in giving tenants the same advantages as freeholders, by enabling them to remove trees of fifteen or twenty years' growth, with nearly the same facility as furniture, the compact ball of fine fibres forming the whole mass of roots, being easily removed entire. In most instances, however, in the culture of fruit in this country, it will be found useful only, in bringing young and thrifty trees soon into bearing, after which the operation may be discontinued, and the trees suffered to attain their full size. For, as dwarfing on small stocks, always shortens the life of the tree, it cannot be questioned that the same result would be produced in some degree, by any other mode of permanent or continued dwarfing. Caution should always be used, as too severe a pruning has sometimes destroyed the tree, and at others, stunted, and injured the quality of the fruit.*

A. J. Downing, in his work on Fruits, states that "several nearly full grown peach, pear, and plum trees, on a very rich soil on the Hudson, which were over luxuriant, but bore no fruit, were root pruned by our advice two years ago, and yielded most excellent and abundant crops last season." A similar result has sometimes been produced by seeding orchards down to grass, which has a powerful tendency to check growth, and as a consequence to increase the productiveness of over-luxuriant trees.

In conclusion, it is proper to remark, that the great and general difficulty in the cultivation of fruit by most persons, is the stunting the trees by neglect; such will of course not need the preceding instructions; and those who give their trees the best culture, on fertile soil, must use a proper discrimination in applying these suggestions.

IRRIGATION OF GARDENS.

We do not know that this has ever been practiced systematically or on an extended scale; although there are certainly facts enough to show its advantages. The practice of the Dutch gardeners in freely and constantly watering many of their vegetable crops, and their consequent fine growth, is well known. During the present season we had a row of red Antwerp raspberries, which exhibited the same influence in a strong light. A part of the row stood under the eves of a wood-house and on the north side of the building, and another part stood in open ground, away from the drippings, but from its advantageous position was subjected to much freer cultivation. But the influence of the water from the roof upon the plants, was very striking throughout the summer, and at the present time, (mid-autumn,) these are *at least triple the size* of the others in open ground. S. Williams, of Waterloo, whose garden was clayey, during the dry hot weather a few years ago, let in the water through small gutters, between the hills and rows of vegetables. "Its genial influence," says he, "was instantaneous; in ten days, my early potatoes grew two thirds in size. In fact, I had never been able to get anything like a fair yield of potatoes in this garden before. Cucumbers grew equally fast; even beans and marrowfat peas bore testimony to its quickening power." McIntosh mentions another case, of the benefit of water upon strawberries. Strawberry beds, three feet wide, were kept watered by trenches between them, about nine inches wide, the trenches being lined with brick, forming four inch walls on each side, and the depth equal to two or three courses of brick. They were laid without mortar, and were for the purpose of preserving the sides of the trenches and for neatness. Water was supplied by a pump, when the ground was dry and the plants were in fruit. "*A much greater crop was thus obtained*, and the plants continued bearing much longer than in beds where there were no trenches for water." This was in the cool and moist climate of England; how much more striking would the results be in this country.

There is not the slightest question, that where water is at command, either from streams, ponds, by pumping with hand, or elevating by wind, the finest results would be produced. The water might be distributed by means of trenches, as already described, or by hose furnished with a nose like that of a watering pot, the latter would doubtless be much the best and most convenient. A very small pipe would be sufficient. Water containing foreign matter would of course be more enriching than pure water. Those who will try the experiment thoroughly, should make the necessary preparations now, at this comparatively leisure season of the year.

WAGES OF LABOR.

From an instructive article on the subject of agricultural labor in different countries, its wages, and the comparative condition of the laborer, in the London Mark Lane Express, we condense the following facts. In our estimates we have called the shilling sterling 22 cents, though its value is a trifle less; and the comparison, though instituted with the English laborer, can be easily made with those of this country.

In England, the average rate of agricultural wages for an able man with a family, is 9 shillings, or $1.98 cents per week. From this is to be deducted cottage rent at 33 cents per week, leaving $1.63 per week to provide himself with the necessaries of life. In France, a laborer in the same situation receives $1.04 per week; in Prussia. 66 cents; in Germany, $1.02 per week; in Holland and Belgium, $1.20; in Italy, and the Austrian states, $1.15 cents. It will be remembered that these averages are those of the common laborer, shepherds, carmen, and mechanics, receiving rather more. The food which the wages named above will purchase in the several countries, is stated in the Express as follows:

In England the laborer can obtain for his 163 cents, or his week's wages, either 39 lbs. of bread, or 11¼ lbs. of meat; 7¼ lbs. of butter; 12¾ lbs. cheese; or 174 lbs. potatoes.

In France, with his 104 cents, he can buy either 46 lbs. of bread; 13¼ lbs of meat; or 261 lbs. of potatoes.

In Prussia, with his 66 cen's per week, the laborer can buy either 36 lbs. of bread; 16 lbs. of meat; or 8¾ lbs. of butter.

In Germany, with 102 cents he obtains either 43¼ lbs. of bread; 18 lbs. of meat; 11½ lbs. of butter; 24 lbs. cheese; or 54 quarts of beer.

In Holland and Belgium, 120 cents will buy either, 58 lbs. of bread; 22 lbs. of beef; or 460 lbs. of potatoes.

In Italy and the Austrian states, the laborer with his 115 cents, can buy either 50 lbs. of bread; 22 lbs. of beef; 8 lbs. of butter; 8 lbs. cheese; or 168 lbs. of potatoes.

This table is interesting as showing not only the prices of labor in the countries named, but also the price of bread, meat, butter, cheese, &c. It is true the bread is stated by the lb. instead of grain by the bushel, but as the flour of a bushel of wheat, say 40 lbs., will make from 63 to 65 lbs. of bread, an estimate may easily be made of the quantity of wheat or flour a man in any of the countries named, would receive for a week's work. The laborer in this country who receives his bushel of wheat a day, or other articles in proportion, will readily conceive the meagre fare, and slender chance of "laying by anything" which must attend the foreign agricultural laborer. In all these countries it will be seen the value of provisions is at least as great as here, and in some instances much greater. It is only by the comparisons which such authentic statements enable them to make, that the free laborers, the farmers or mechanics of this country, can fully appreciate the advantages of their position.

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Onions.—For the past ten years from 30,000 to 60,000 bushels of onions have been raised in the single town of Danvers, Mass.

Fattening Hogs.—The latest improvement consists in keeping them as clean as possible.

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* A similar effect on the fruit of young and newly transplanted trees, which are made to bear in consequence of their removal, not unfrequently takes place; hence, purchasers of trees sometimes suppose they have been imposed upon by nurserymen, when in fact the new fruit has as yet had no chance to exhibit its real qualities.

WINTERING STOCK.

Throughout a considerable portion of the country, there is a scarcity of materials on which to feed stock the coming winter. The general warmth and moisture of the atmosphere, however, since the occurrence of rains in the beginning of autumn, have much promoted the growth of grass; thus fortunately affording an opportunity for grazing up to a late period of the season. And where fields of rye have been sown for the purpose of giving late fall and early spring pasturage, the favorableness of the season has probably induced a growth which will furnish support in a great degree, to light cattle and sheep. Yearlings, calves, and sheep, may therefore be grazed on such fields, care being taken that the bite is not too short, till snow covers the ground; and the spring growth may be availed of for the same purpose, to a longer or shorter period, according to the necessities of the farmer, or the wants of his stock. If, while the stock is feeding on rye, too lax a state of the bowels occurs, as is sometimes the case, owing to the succulence of the rye, the animals should be fed with some dry hay, and a little salt as a condiment, which will check the tendency to purge.

But under all circumstances, the most economical appropriation of the winter's stock of fodder, becomes an important desideratum. The great aim should be the maintainence of the stock in proper condition with the least expense. The materials at the disposal of farmers for this purpose, consist usually of hay, straw of various grains, fodder of Indian corn, different vegetables in greater or less quantities, with occasionally some meal or "mill stuffs." A general saving of all rough fodder may be made by cutting with a machine. This saving results in various ways, some of which we will specify. 1. Coarse fodder, such as rank hay, straw, or corn-stalks, are thus wrought into a more convenient form for mastication, by which animals are often induced to eat that which would otherwise be rejected, or only partially consumed. This is particularly the case with clover hay, more or less of which is almost always wasted if fed in the long state, but which when passed through a cutter, if it has been properly cured, is readily eaten perfectly clean. The same remark is applicable, but in a less degree, to straw and corn fodder. 2. By cutting, fodder of inferior quality may be easily mixed in any desired proportions with that which is better or more palatable, and the poorer kind thus be made to conduce to the animal's support. Cutting also affords a convenient mode of mixing meal, shorts, or bran, with fodder, by which may be gained the double advantage of inducing stock to eat less palatable articles, and of so diffusing the meal that all its nutriment is appropriated by the animal. 3. Besides the advantages above mentioned, another and not less important benefit is known to be derived by laboring animals in the additional time it affords them for rest—the cutting performing in a great degree the work of chewing and preparation for digestion. This benefit is regarded as so important by those accustomed to feeding work horses and oxen on cut food, that nothing would induce them to discontinue the practice.

There are cases however, in which the advantages of cutting may not repay the expenses. If the food to be used is wholly hay of very fine quality, and the stock consuming it is not required to labor, it might be so fed that no waste would accrue, or nothing be gained by cutting. But wherever a mixture of fodder would be expedient, or meal, &c., is to be used, or working animals are to be provided for, the advantages of cutting will be found to repay the expenses ten fold.

In times past, the writer has had some experience in feeding stock, and has practiced various modes with a view to economizing food and cost. During seasons of scarcity of hay, a course like the following was adopted with advantage. Good hay and straw, (oat and barley straw are preferable, but wheat and rye straw were often used,) were cut together in equal parts. Chaff of wheat or oats was sometimes used instead of straw. This fodder was mixed with corn meal, at the rate of two quarts of meal to the hundred of fodder. First a layer of six or seven inches of the straw and hay was thrown into a large box, spread over the bottom, and moistened with hot water—then the meal was scattered over it, and afterwards well mixed with forks. Other layers were prepared in the same way, until enough was ready for twenty head of cattle for twenty-four hours. It was made the object to give each grown animal, (cow or ox,) twenty-five pounds of the cut straw and hay every twenty-four hours—that is, each was allowed twelve and a half pounds of hay, the same quantity of straw, and a pint of meal per day. Younger and smaller stock was fed in proportion. Cows giving milk, and oxen when working, had the meal increased—giving in such instances, two to three quarts per day. Sometimes rye meal, shorts, and occasionally oil-cake were used, either by themselves or in connection with the corn-meal; endeavoring to use about the relative quantities of each which would afford the same amount of nutriment; but as we had no definite standard, we gave as nearly as practicable equal weights.

Not the least waste attended this course of feeding, and we found stock to do well on it. Though not fat, they were in good trim, and their coats got into fine order early in spring, so that they went to grass in excellent condition.

In feeding potatoes or other vegetables to store stock, where the quantity does not exceed half a bushel per day to each grown cow or ox, we have usually given them at one feed in the morning, after the first foddering of hay.

Col. Jaques, of Massachusetts, who is known as an economical feeder of stock, adopts the following plan, which we copied sometime since from notes furnished by him:

"For 30 cows, cut with a machine 30 bushels for one feed; one-third common or English hay, one third salt hay, and one-third rye or barley straw; add 30 quarts of wheat-bran or shorts, and ten quarts of oat and corn meal moistened with water. One bushel of this mixture is given to each cow in the morning, and the same quantity at noon and in the evening. In addition to this, a peck of mangel wurtzel is given to each cow per day. This mode of feeding has been found to produce nearly as much milk as the best grass feed in summer."

Stock must not be too much stinted in their food in the fore part of winter, nor should an attempt be made to keep them at once on the poorer kinds of fodder. In the coldest weather of January and February their appetites will be sharpest, and then the poor fodder will be eaten to best advantage. We said their food should not be stinted in the beginning; the reason is, that if they are brought low in flesh in the first of the winter, they cannot stand the inclemency of the weather so well, and they fail rapidly towards spring. Hence if any *pinching* must be done, it had better be deferred to the last end of the season of feeding, as relief may then be shortly expected from the growth of grass. The greatest regularity should be observed in feeding—always giving the food as near as practicable at certain fixed times. But no food should at any time be given to be left—all should be eaten to the last straw which is eatable. Still, substances which are really innutricious—such as the large, sour butts of corn-stalks and the woody stems of large weeds and coarse herbage—should not be given to stock with the expectation that they will be eaten and benefit be derived from them.

The importance of shelter to stock must not be overlooked—it having been fully demonstrated that warmth is equivalent to food. The heat of the animal system is kept up in the same manner as flame is supported—that is, by an union of carbon and oxygen. The animal derives its carbon from the food, which, having undergone digestion, is taken up by the blood and thence conveyed to the lungs, where by the act of respiration, it is united with a portion of the oxygen of the atmosphere, and heat is produced. Exposure to a low temperature dissipates the animal heat, just as heat is driven off from any other body similarly situated. It is obvious that the natural temperature of the body must be sustained or the animal will perish. As carbon is the only material by which this heat can be furnished, that substance must either be supplied to the blood from the fat and muscle already formed, or the blood must obtain it through the medium of food. If the food is deficient, the supply must be made up from a waste of the bodily parts; and the consequence will be loss of flesh and weight, which if long continued may cause the death of the animal, either by finally cutting off the source of heat, or so weakening the system that it yields to the attack of some malady. To sustain the animal in proper condition, then, requires a supply of food proportioned to the degree of cold to which it is exposed; and it is therefore obvious that by avoiding exposure to cold, we save food.

HEDGE FOR WET GROUNDS.

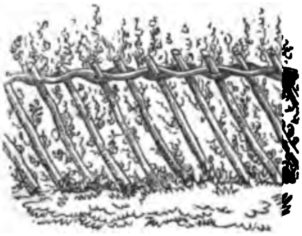


Fig. 108.

The flats or low grounds, sometimes of great extent, which border on rivers and large creeks, may be fenced by driving piles cut from willow trees, about as large as a man's wrist, into the earth at a distance of about one foot from each other. They are kept together by two poles running along the top, and alternating with the piles, as represented by the annexed figure. The work is to be done late in autumn or early in spring; the stakes take root and grow; and by sending up lateral branches, soon form a solid and permanent fence. Twisting and interweaving the branches, is an essential part of the operation. The use of a crowbar to make the holes in the earth, greatly facilitates the work. One hand will make, when the materials are convenient, from ten to twelve rods of such fence in a day.

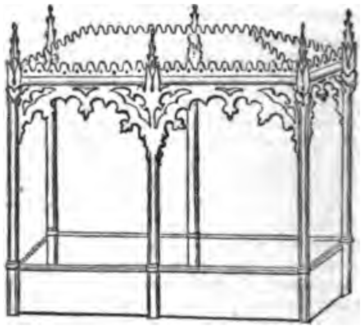
HORTICULTURAL ITEMS.

Roses.—Some idea may be formed of the extent of the cultivation of ornamental plants by the nurserymen of England, from the fact, that at the celebrated Sawbridgeworth Nursery, owned by T. Rivers, a single "quarter of dwarf roses budded this year, contains 80,000 plants; and that in the same nursery, *twenty-four persons* were constantly occupied in budding roses, during the whole of the month of August."

Specific food of Plants.—It is well known that salt has been sometimes recommended for the destruction of weeds in gravel walks, and that most plants are destroyed by heavy doses. There are some plants, on the contrary, which bear large quantities of it,—among which is the *Polygonum aviculare*, a weed well known in this country as well as in England, as growing in paths and frequented places. A gentleman in Scotland, according to the Gardener's Chronicle, in attempting to destroy the weeds in the drive through his park, by the use of salt, so increased this weed, that the road was literally rendered green by it.

Transplanting the White Pine.—Three years ago, a neighbor went half a day's journey and procured about 60 young trees of the white pine, from three to six feet high, for the ornament of his grounds. The trees were taken up and set out with ordinary care, with the removal of no soil upon the roots. Only two of them are now living, and one of these is in quite a doubtful state, as to life or death. About the same time, the writer procured fifteen trees of the same species, from five to twelve feet high, removing with them a large cake of earth, (not frozen) sufficient to keep them steady in the wind without staking. All of them are now living, and most of them growing vigorously.

Californian Plants.—The celebrated botanist, Hartweg, has been sent out this fall by the London Horticultural Society, to explore the ground which had just been commenced some years ago by David Douglass, before the death of that eminent individual. Hartweg is to spend three years in California, and many handsome plants will doubtless be added to those already in cultivation.



FLOWER CASES.—(Fig. 109.)

A portable green-house, called from the name of the inventor, Ward's Cases, has lately been brought into use in the neighborhood of London. It consists of a box or trough for holding the soil, made of zinc, covered with a frame set with glass, high enough to admit of the free growth of the plants, somewhat in the shape of a bird-cage. The cases being tight, keep in the moisture; and the plants, though standing in a very dry room, have all the advantages of a moist atmosphere. The cases also prevent injury from sudden changes of temperature, and afford considerable protection from frost; they also keep the plants perfectly free from dust.

There should be one hole in the bottom of the zinc trough to let off the surplus water. A door admits entrance to the case. When exposed daily to a few hours of sun, the plants do perfectly well *for weeks* without any attention whatever, the moisture of the soil being entirely prevented by the glass casing from evaporation. The whole may stand upon a table, and no pots being needed for the plants to stand in, the beautiful appearance of a miniature conservatory is presented.

The bottom should first be lined with broken earthenware, and then turfy loam to admit drainage. The hole for the egress of water, after being left open for twenty-four hours, may then be closed, having by that time, allowed enough to pass off.

Such plants are said to do best as grow naturally in moist and shady situations. Among those which have succeeded finely, are crocuses, winter aconite, the various cactuses, aloes, primroses, begonias, anemones, myrtles, jasmines, &c.

Sir W. J. Hooker, an eminent British botanist, says in a letter to the inventor, "Splendid as is the hot-house and green-house collection at Woburn Abbey, I doubt whether that gives more pleasure to the noble proprietors and their numerous visitors, than the beautiful little collection in Mr. Ward's case, that occupies a table in the library, and flourishes without requiring the skill of the gardener in its cultivation."

As we republican Yankees cannot very well afford splendid green-houses, this must be the very thing we want.

CUTTING HAY FOR STOCK.

Mr. Thos. W. Ward, gives in the Massachusetts Plowman, some important facts in regard to the utility of cutting hay for feeding cattle. He says he has for years practiced cutting hay for his horses, which, mixed with meal, he thinks far the best and cheapest feed they can have. He also finds a great advantage in cutting coarse hay and straw, which he says cattle will eat readily if cut fine and mixed with only a third part of good hay. He says, "to test the value of the cutter in point of good economy, I adopted the following method, viz: After having kept four oxen on long hay for some days, I weighed hay enough to keep them 24 hours. At the expiration of which I weighed what hay was left, together with what little remained in their crib, and found they had eaten 104¼ lbs. of hay. Their excrement evacuated during the same time weighed 178¼ lbs.; exceeding the quantity of hay by 78 lbs. They were kept in the barn all the time except being driven to water, after which they were immediately put in the barn. While out, only one ox voided, of this there was no account made.

"I then kept them 24 hours on cut hay from the same mow, thinking that in this time they might empty themselves of the long hay. I then weighed 104¼ lbs., (the same quantity they ate of long hay,) from the same mow —kept them in the barn and watered as before. With them there was no difference except in this instance, they all returned to the barn without having anything pass from them.

"At the end of the 24 hours I weighed the hay that was left, and found they had eaten 86 lbs. only; and their excrement during the same time weighed 208¼ lbs., exceeding the weight of cut hay eaten, by 122¼ lbs. It was my purpose in each instance to let them have what they needed, and no more; in neither case was there a waste of hay, and in each case the oxen were comfortably filled. They had done no work for several days before being put on the trial, nor did they do any while on trial, nor during the intervening 24 hours." These facts show a saving in this instance, of about 18 per cent. in favor of cut hay, and also an increase in weight of the excrement, of 15 per cent. Thus, says Mr. W., "we spend less hay and make more manure, which is the farmer's capital." He thinks the cattle did as well when fed on the cut hay, as when fed on the long. He says he will not attempt to solve the mystery in regard to least hay making most manure.

THE POTATAO ROT IN EUROPE.

The extensive destruction of the potato crop in Europe has awakened a great deal of inquiry among scientific men and through all classes of people. The Editor of the London Gardener's Chronicle, estimates the loss at five-sixths of the whole crop of Europe. The speedy destruction in many cases, may be inferred from the statement of a correspondent of that paper:—"Two days ago, twelve acres were still safe; they are now gone." But the further investigations have been pushed, by men of the most eminent abilities, the greater seems to be the doubt which hangs over the cause and cure; and the scientific world appears yet divided between the opinion of its being a gangrene or murrain, or the blighting effects of a fungus.

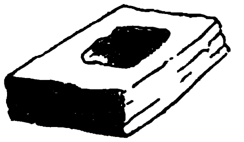
The opinion which has prevailed to some extent in this country, as well as in Europe, that common salt was an efficient remedy, and which was strengthened by the fact that on parts of the sea-coast, exposed to saline moisture, the rot had not appeared,—appears to be overthrown by failure in other places on the sea, and where in experiment salt was directly applied.

All that scientific men have yet done, is to ***suggest experiments*** for determining the nature of the malady, and for saving such parts of diseased potatoes, as may remain uninjured, by chemical process. The latter has heen to for use in cooking for food, and for mixing with grain flour has been manufactured to a considerable extent. Kiln-drying the diseased potatoes at a temperature not higher than 180 degrees Fah., and not longer than fifteen or twenty minutes, has been found at once to arrest all de- a considerable degree successful; and good potato flour, cay or progress in the disease. Professor Henslow succeeded in obtaining from half a bushel of *sound* potatoes, 4 lbs. 10 oz. of flour; and from the same quantity of diseased and decaying tubers, 3 lbs. 1 oz. The quality of the latter was equally good, the starch of potatoes remaining a long time uninjured in diseased ones, and only lessened in quantity. The process of extracting the flour, consists essentially, in first washing the potatoes, then grafting or mashing them to a fine pulp, (which might be done rapidly by means of a common grater cider-mill;) and washing the pulp repeatedly with water. The washing may be conveniently done by placing the pulp on a canvass sieve or bag, and stirring it well, while a stream of water is suffered to run upon it, into a large vessel beneath. When the water ceases to become milky, it has carried off the flour; and the coarse fibrous matter remaining behind may be thrown away. The flour water, after standing 10 minutes to settle, is racked off, fresh water is applied, is suffered again to stand 10 minutes, and again racked off; the process is repeated several times, until it is thoroughly washed. It is then dried on stretched flannel.

A hundred weight of good potatoes yields about 18 lbs. of good starch; the quantity however varies. The average proportion of water in good potatoes, is about 80 lbs. per hundred weight. Professor Henslow, hired his potatoes grated by hand. "The cost of grating 7 sacks was 17*s*. 6*d*.; the flour saved 122 lbs.; call this 8 stone, which may be used instead of 8 stone of wheat-flour, at 2*s*. 6*d*. per stone, and I lose nothing; whilst the poor graters have gained, and the amount of human food saved, will tend to keep down prices."

CHEAP CONTRIVANCES—SPLITTING WOOD.

A cheap and simple contrivance, costing but a few minutes labor, and used every day in the year, is often worth more than the complex and ostentatious machine but rarely needed in practice.



Every man who splits up stove-wood, knows that by the usual way, he has to spend two-thirds of his time in setting up the block ready for the blow of the axe.

To save this time, we have adopted the following way, and found it to save at least two-thirds the time, equal to at least several dollars a year to every man who has to keep one stove going.

A large flat block of wood, six or eight inches thick, and nearly two feet wide, has a large hole cut through the middle about eight or nine inches square. The block of stove-wood is set on end in this hole, and quick and repeated strokes of the axe splits it up finely, without once touching it with the hand.

If such a block is not easily to be had, take two crooked logs, and pin them together.

CULTURE OF BROOM CORN.

L. Tucker, Esq.—I am not prepared to give satisfactory answers to your correspondent, on the subject of broom corn, in every particular; but will briefly state, that we have, the past summer, had about thirty-five acres under cultivation; about half on the Mohawk low lands, (or flats) which is the soil generally perferred, the balance adjoining, on a gravelly soil. On account of the extreme drouth, the low ground has done much the best.

2d. As to the profits, compared with other crops. Much depends on the success you may have; some seasons it does much better than others; the past has been too dry to give a good large brush, but with us the seed has been an extraordinary crop—averaging nearly or quite fifty bushels to the acre, and most of it very full and heavy, weighing 31 lbs. to the bushel, and is excellent for fatting hogs. They eat it greedily, and thrive on it as well, if not better, than on Indian corn. An acre of good broom corn should yield from four to six hundred lbs. of brush; and the seed, when good, is worth, in its rough state, as much as oats for feed.

I have now on hand, enough of prime seed, to plant two hundred acres, and can supply your correspondent with any reasonable quantity, at the lowest market price. My seed is the largest and best I have ever seen. A letter directed J. D. F., West Schuyler, will be attended to.

As to the query, "will the increased production be likely to over stock the market?" Like every other product of the soil, there may be an over stock some years, more than others, but thus far the demand has kept up with the product.
J. D. F.

West Schuyler, Herkimer co., Nov. 1845.

Weeds.—Succulent weeds may be converted into a blackened and lifeless mass, applicable as manure by mixing them layer for layer in a compost with quick-lime.

NUTRITIVE VALUE OF DIFFERENT KINDS OF FOOD.

The following table, condensed from the Gardener's Chronicle, gives the value of different kinds of food, as deduced from theory, and from the practical observations of several eminent agriculturists. The comparison is interesting, and shows in some cases the near coincidence between theory and experiment, and in others the wide departure in their results. The table also exhibits the the quantity of water in each substance, and the proportion of nitrogen entering into its composition.

It will be observed, as a reason of the discrepancy often noticed, that on different animals, and on different classes of animals, the same amount of food may give very different results, some animals being more affected by certain kinds of food than others. It must also be remembered that the same kind of food varies in nutritive value, with soil, climate, season, culture, mode of feeding, as ground or unground, and other controlling causes.

The nutritive equivalent is the quantity required of each substance to afford nourishment equal to 100 lbs. of common natural meadow hay.

Different kinds of Food.	Water per cent.	Nitrogen per cent. Substance dry.	Nitrogen per cent before dried.	NUTRITIVE EQUIVALENT ACCORDING TO										
				Theory.	Block.	Petri.	Meyer.	Thaer.	Pabst.	Flottow.	Pohl.	Crud.	Weber.	Dombasle.
Common Natural Meadow Hay,...	11.0	1.34	1.15	100	100	100	100	100	100	100	100	100	100	100
Ditto, of very choice quality,.....	14.0	1.50	1.30	98										
Natural meadow-hay, picked, ...	18.8	2.40	2.00	58	108	100	....	....	....	100				
Lucerne, free from woody stems, .	16.6	1.66	1.38	83	....	90	....	90	100	....	....	90	90	90
Red Clover, cut in flower, dried,..	10.1	1.70	1.54	75	100	70	....	90	100	....	....	90		
Ditto, Green,......................	76.0	......	9.64	3'1	430	....	....	450	425	500	450			
New Wheat-Straw,........... ...	26.0	0.36	0.27	426	200	360	150	450	300	175				
Old Wheat-Straw,..................	8.5	0.53	0.49	235										
Oat-Straw, ...	21.0	0.36	0.30	383	200	200	150	190	200	175			150	
Barley-Straw, ...	11.0	0.30	0.25	460	193	180	150	150	200	175	....			
Pea-Straw,..........................	8.5	1.95	1.79	64	165	200	150	130	150	200	90			
Mangold-Wurzel leaves,..........	88.9	4.50	0.50	280	600	....	....	600	....	....	600			
Hearted Cabbages, ...	92.3	3.70	0.28	411	556	500	250	429	600	600	....	500		
Ruta-Bagas,........................	91.0	1.83	1.17	676	....	300	....	300	250	....	350			
Common Turneps,.................	92.5	1.70	0.13	885	533	600	290	526	450	500	525	525	500	
Mangold Wurzel, ...	87.8	1.70	0.21	548	366	400	250	460	250	300	....	255	....	261
White Silesian Beet, ...	85.6	1.43	0.18	669	....	....	....	....	....	....	....	....	....	220
Carrots, ...	87.6	2.40	0.30	382	366	250	225	300	250	....	266	260	266	307
Potatoes,...........................	75.9	1.50	0.36	319	216	200	150	200	200	250	200	210	....	187
Field Beans, (English,)..........	7.9	5.50	5.11	23	30	54	50	73	40	....	50			
White Peas, dried................	8.6	4.20	3.84	27	30	54	48	66	40	....	47			
Kidney Beans, (White,)	5.0	4.30	4.58	25	....	39								
New Indian-corn,................	18.0	2.00	1.64	70	....	52								
Buckwheat,........................	12.5	2.40	2.10	55	....	64								
Barley,.............................	13.2	2.02	1.76	65	33	61	53	76	50	....	....	....	....	47
Oats,.........	20.8	2.20	1.74	68	....	71	....	86	60	....	50			
Rye,...............................	11.5	1.70	1.50	77	33	55	51	71	50	44	38			
Wheat, ...	10.5	2.33	2.09	55	27	52	46	64	40					
Fresh bran,........................	37.1	2.18	1.36	85	105									
Wheat chaff,......................	7.6	0.94	0.85	135	160	....	....	....	....	....	175			
Oil-cake, (Linseed,).............	13 4	6.00	5.20	22	42	108	....	....	....	....	....	....	57	
Rice, (Piedmont,)................	13.4	1.39	1.20	96										

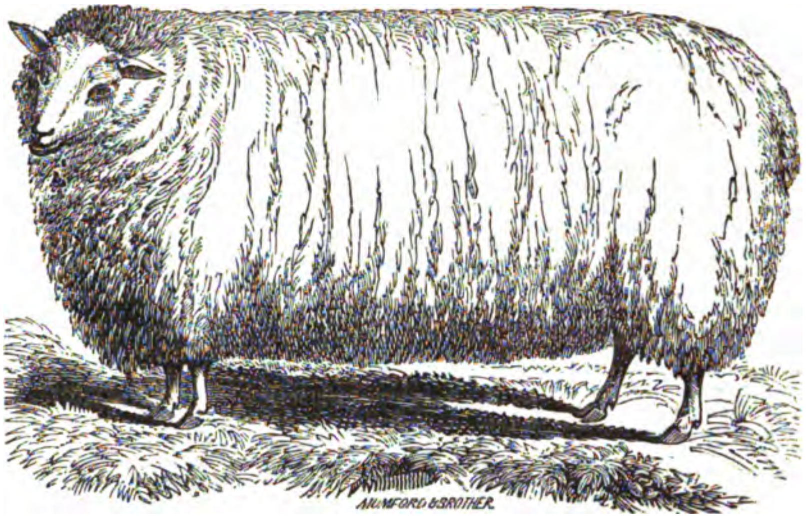
From the above practical results, we have taken the mean, of several of the most important articles, from which our readers will see at a glance the average results of all the experiments, and which will be interesting as well as very valuable, as affording a comparison of the value of the various substances. We have also placed alongside the equivalent, according to theory, to which the results of the experiments sometimes approach quite near, and at other times are quite remote. The whole, however, cannot fail to throw light on the subject; for though strict accuracy cannot be expected where so many causes must combine to vary the results, yet a tolerable approximation *for comparison*, is doubtless in nearly every case attained.

	Mean of exp's.	Theory
Hay,......................	100	100
Lucerne,..................	92	83
Red clover hay,..........	94	75
New Wheat-straw (variable,)	272	426
Oat-straw, ...	166	383
Barley-straw,............	175	460
Pea-straw,...............	169	64
Cabbages,................	419	411
Ruta-bagas,..............	300	676
Common turneps,.........	494	885
Mangold Wurzel,.........	317	548
Carrots, ...	276	382
Potatoes,.................	201	319
	Mean of expr's.	Theory.
Peas,......................	47	27
Indian Corn,..............	52	70
Barley,....................	53	65
Oats,......................	67	68
Wheat,....................	46	55

LIGHTNING CULTURE.

Much interest has been excited by the experiments of Dr. Foster in Scotland, to show the influence of atmospheric electricity on the growth of plants. James Cowie and two distinguished farmers called on the Doctor, and the result of their examination is given in the London Gardener's Chronicle. Not finding the proprietor at home, they made inquiries of a young man, a servant on the farm, who, on being asked if the crops were better where the poles and wires were placed, than on the rest of the field, answered,—" Weel, the crop sud be better, considerin' the additional pickle dung it got beside the wires, but that he could not say there was any difference observable."

Productive Apple-tree.—The Germantown (Pa.) Telegraph states, that there is an apple-tree near that place, which has repeatedly borne over hundred bushels of apples at one crop.



LEICESTER WETHER.—(Fig. 113.)

The above is a portrait, from life, of a Bakewell or Leicester wether, bred and fed by Maj. **Philip Reybold**, of Delaware, and slaughtered in Philadelphia, in March, 1842. He was two years old and weighed alive, 251 lbs.—the four quarters 147 lbs., or nearly 37 lbs. per quarter. The saddle weighed 78 lbs. and cut 4½ inches of fat on the ribs. Maj. Reybold's is, we believe, the largest of any long-wooled flock in America—numbering, as we have been informed, over 600 of the pure blood. He has taken great pains in breeding, and has found his flock highly profitable. One of his sons has during the past season been to England for the purpose of procuring bucks, which, if possible, might still farther improve their sheep. He returned, as we hear, with two very large and splendid bucks of what are usually called in England the Improved Cotswold, or Improved Oxfordshire breed. This breed originated, according to British authors, by a cross of the Bakewell or Leicester, with the old Oxfordshire or Cotswold sheep. They are highly prized as fattening sheep, possess good constitutions, and yield very heavy fleeces of long wool. They and the Leicesters, carry the principal prizes for long-wooled sheep in England. The increasing demand in this country for long wool, and the increasing demand also, for fine mutton, renders these sheep particularly adapted for situations convenient to market, and the profits which they afford in such situations are undoubtedly equal, at least, to those given by other breeds under any circumstances.

WOOD AND WOOD-LANDS.

The fore part of the winter is the best time for cutting and securing the year's wood, as well as for clearing off the forest preparatory to cultivation. Before snow falls, or while there is little on the ground, it is much more convenient and pleasant working in the woods—the trees can be readily cut close to the ground, the small limbs and brush can be easily separated from the wood and piled by themselves, and the workmen are not obliged to plunge their hands in cold snow to pick out the wood, which is always more or less buried if the snow is deep.

Few things are of more consequence to the farmer than a judicious management of his wood-lands; and yet nothing is generally more neglected. Such in fact has been the inattention to this subject, that a scarcity of wood and timber has occurred in many districts naturally provided with abundance. After having cut off the old or "first growth," as it is called, fires have in some instances been allowed to sweep over the ground with such intensity as not only to prevent the stumps from sprouting, but also to destroy most of the seeds of trees contained in the soil—thus leaving the lands comparatively a barren waste. Besides this, cattle are often allowed to range at will, and are indeed sometimes compelled to obtain their living by brousing on the sprouts and young trees, which permits only a scrubby, worthless growth.

It has been sometimes recommended to cut out old decaying trees first, but the practice is attended with several objections, and we believe experience has proved that the best course is to cut off the entire growth, clean and smooth. In attempting to cut out the old trees, a great many of the smaller ones are inevitably broken down and spoiled, and as the growth is always kept uneven, the greatest quantity is prevented from accumulating on the ground at once.

Where fuel is the object, the course now pursued in those sections where wood-lots are turned to the best account, is, to cut everything close and clean once in fifteen to twenty years. The lots are protected as much as possible against fires, and cattle are kept entirely off. Lands producing hard-wood are in this way made to yield from fifteen to twenty cords of excellent wood per acre at each cutting—giving a growth at least equal to a cord per acre annually.

On cutting the primitive or old growth from a lot, the succeeding growth cannot be relied on from sprouts—especially if the trees were much on the decline. In such cases we have usually to wait for a generation to come from seed, which generally takes a considerably longer time than is required where a thrifty growth is cut; because in the latter case the stumps sprout vigorously and as great a growth is obtained in one year as ordinarily takes place from seed in four years. This is one of the great advantages of frequent and clean cutting—a rapid, even, and thick growth always springs from the stump, and we have never to wait for the slow and somewhat uncertain process of a renewal from seed.

Trees had better be cut close to the ground, whether the lot is intended to grow up again or to be cleared. When there is a great depth of snow on the ground, it is difficult to cut trees closely, and we sometimes see the stumps from two to three feet high; but we think sufficient care is not generally taken to cut low. The best of the wood or timber is generally next the ground. If the land is to be cleared, the plow and the harrow can be made to work much nearer the stumps if they are cut close to the ground, and if the lot is intended to grow up, the suckers or sprouts grow much more vigorously from low than from high stumps. If the stumps are left high, the sprouts often come out on the sides or near the top, and the winds break them off, or the stumps rot and they perish. These remarks of course apply to hard-wood trees; resinous ones never start from the stump.

In our next we shall give an article on this subject, received since the above was written from W. Bacon, Esq.

FOOT-ROT IN SHEEP.

We have recieved several communications in reference to the article on this subject by "Grazier," in our August number. The opinion of Grazier that the foot-rot is not contagious, is controverted. A correspondent with the signature "E. P.," who dates at Bridport, Vt., thinks it possable that the error in regard to the non-contagiousness of this disease, was imbibed from having mistaken another disease with which the feet of sheep are sometimes attacked, for the real foot-rot. This *spurious* kind of foot-rot, according to E. P., "is caused by a stoppage in the secretory outlet between the claws, or from inflamation by bruises, gravel, &c., and cannot, from the nature of the case, be contagious." This, E. P. thinks, is the disease to which Grazier refers, and gives directions for curing. "It is," says E. P. "very easily managed, and I have never known more than four or five lame sheep to the hundred affected with it at a time." But the *real* foot-rot, E. P. thinks "a very different article to contend with, though in its first appearance, it somewhat resembles the above."

In proof of the contagiousness of foot-rot, E. P. states the following case:—"Sometime between the years 1826 and 1830, Gen. Sumner, of Boston, had a flock of merino sheep kept in Addison county, Vt. About the latter year, he purchased some imported Saxon sheep, some of which had the foot-rot, and added them to his former flock. About the same time he appointed an agent in my immediate neighborhood, to have the care of the sheep. The foot-rot spread with great rapidity through the whole flock. This was the first time I ever saw the disease, or heard of its being in this country. Nor did this infectious disorder stop with this flock; several others became infected with it by being driven along the road where the lame ones had been previously driven, much to the annoyance of their owners, who at that time knew nothing of the disease or its remedy; consequently great losses were sustained before they could get rid of the detestable plague.

"A portion of Gen. S.'s flock were kept adjoining my farm. On the morning of a particular day, my sheep were salted, and at noon of that same day, a part of them were discovered to be mixed with Gen. S.'s sheep, and were immediately separated, so that they could not have been together only a few hours. Thirteen days from that time, one of my sheep was lame; it was caught immediately, and doctored, and in a few days got well. In about two weeks from the first one being lame, there were half a dozen, and in about eight weeks, one half the flock was lame; a serious business, that lasted me more than two years of doctering after 'Grazier's' mode of making an application to the lame ones only. I have known several flocks infected with the foot-rot by being put in a pen to be washed, where diseased ones had previously been; and by experiment, I have known sheep that had never before been exposed, thoroughly impregnated with the foot-rot where the lame had been kept and removed *four weeks* before the well ones were put in. Indeed, so well is it understood in Vermont that the foot-rot is contagious, that a law has been very wisely passed for restraining sheep so infected within proper limits, and by reference to the records of our courts, it may be seen that suits have been sustained and damages recovered, for the neglect of keeping sheep so disordered, according to law."

In regard to the symptoms and cure of the foot-rot, E. P. observes—"When a sheep first begins to be lame with the foot-rot, it is very easily detected, the tread of the foot being different from ordinary lameness, bearing directly on the toe of the foot, causing the ankle or fetlock joint to project forward, and if in the fore foot, the animal will frequently stumble. On examining at this stage, there is frequently nothing to be discovered by the eye, but on handling the foot it feels hot, and throws off a smell emitted by no other disease than foot-rot. By pressing the foot in various places, it will be found most tender at the heel. It commences at the heel of either claw, frequently between the claws, but always under the skin near where the hoof or horny substance commences, and it is not uncommon for it to work its way over the whole foot between the hoof and quick before it makes its external appearance, causing the animal much distress and loss of appetite. It however eventually breaks out a rotten sore.

"The difficulty of getting this loathsome disease out of a flock, consists not in its being hard to cure, but from its highly contagious character; continually going the rounds; by the time one sheep is cured another takes it and so on, the same sheep having been known to take it and be cured of it three times in one season.

"As to cures it has been long known that blue-vitriol [sulphate of copper] readily effects the purpose in a single sheep; but for the reason before stated, many farmers have been baffled in thoroughly trying it, and have kept the disease in their flocks for years. The following prescription I have never known to fail of effecting an entire cure if thoroughly applied:

Copperas half a pound,
Alum half a pound,
Blue-vitriol one pound.

Dissolve all in two gallons strong tobacco water. This compound may be applied by means of a small piece of sponge, tied to a handle of convenient length. The sheep should be caught, one by one, every foot cleaned, the long toes taken off by the clippers. Then with a sharp knife the foot should be pared and examined. If it is sound, take the swab and thoroughly wash the foot all over as high as the fetlock joint; hold on to the sheep till a little dried, and turn out to pasture. If, on examination, a foot is found diseased, every particle of hoof should be pared away over the affected part; better pare a little too much than not enough; if blood follows the knife it will do no harm. The foot being thus prepared, apply the wash as before, and then turn them out.

"In this compound, the vitriol is the main ingredient in performing the cure, the tobacco is healing, while the alum and copperas *set* the vitriol and it forms a coat like paint, which adheres to the foot, cures the lameness, and acts as a preventive for the well ones. If a pasture is procured that has not been impregnated with the disease, and the sheep are transfered to it, three applications, one week apart, will effect an entire cure; but if the sheep are to remain in the same lot, the three applications should be made as above, and they should besides, be run over once a month during the summer, or until the disease is entirely eradicated from the soil. I have seen many experiments tried with doctoring the lame ones only, and by driving them over a bed of lime and various other ways, without the desired effect. Neither are high and dry pastures any guard against the ravages of this disease, as has been abundantly tested on the high and rocky pastures of Crown Point, and on the mountain summits of Vermont. But in no instance have I known the above remedy, faithfully applied, without performing a cure."

Another correspondent who signs "Truth," and dates from Hoosick, N. Y., writes in reference to the contagiousness of foot-rot:—"I know a flock of sheep that was almost surrounded, for years, by neighboring flocks affected with foot-rot, but this flock remained perfectly free from the disease until one, thus affected, accidentally got into the lot with it. The distemper soon spread through the flock. It would seem singular indeed, that, immediately after the diseased sheep had got in with sound ones, they should all *bruise their hoofs* in such a particular manner as to produce such sameness in the result. * * * I will state for the gentleman's information, that the space of time between a sheep's being exposed and the symptoms becoming visible, varies from nine to fourteen days."

The question as to the contagiousness of foot-rot, is, it must be admitted, one of great importance; and we deem it therefore proper to give as full an understanding as possible of the case. It may not be generally known to our readers that this has formerly been made the subject of much controversy in Europe, both among farmers and scientific writers. Mr. Youatt, in his excellent work drawn up under the direction of the British Society for the Diffusion of Useful Knowledge, enters at length into the discussion of the subject; but he comes at last to the conclusion that the balance of evidence is decidedly in favor of the contagiousness or infectiousness of this disease. Mr. Youatt, however, holds in common with Prof. Dick, and many other veterinary writers, that foot-rot is sometimes originated spontaneously—that is, it is caused "by the feet having been macerated by the soft and damp pastures on which they have trodden, and the internal part of the foot being thus denuded and injured." He says—"There are many flocks in which it would be idle to seek for the cause of foot-rot in infection"—* * * and adds, "It is almost superfluous to argue that there are numerous diseases that may be produced by natural causes, and yet are communicable from one animal to another."

Mr. Youatt then goes on to relate many experiments which have been made by different persons to test the point under consideraion, by inoculating the feet of sound sheep with the virus of foot-rot. Many of these attempts at inoculation failed, but several succeeded and clearly established the fact of contagiousness. In one class of experiments referred to, conducted by Prof. Gohier, the disease was only communicated by inoculation in two cases out of six; but in the experiments of M. Favre, a Genevese veterinarian of high standing, out of thirty-two sound sheep inoculated with the matter of foot-rot, twenty became infected. "On one of the sheep," says Mr. Youatt, "that would not take the infection, he operated six times ineffectually. He tried once more and foot-rot was produced." In the cases where the disease was produced by inoculation, it was sufficiently marked to leave no room for doubt.

P. S. Since writing the above we have received a communication from Rutland, Vt., signed "Farmer." This writer takes the same ground in relation to foot-rot and the communication of "Grazier," as our correspondents above mentioned. But upon carefully reading over his article, we cannot discover any important point that is not already sufficiently discussed and explained, and any further remarks would therefore seem to be unnecessary.

FARMERS' CONFERENCE MEETING.

We find in the *Onondaga Standard*, a report of the doings of a Farmers' Conference, held at Marcellus, in that county, on the 6th Nov., from which we take pleasure in presenting the following extracts. We hope many of these conference or club meetings will be held by our farmers during the present winter. We know of no measure cauculated to have a more decidedly beneficial effect than such meetings, where, with the freedom of the fire-side, each one gives the details of his practice and the results of his experience. In this way, much useful information is imparted, and a spirit of inquiry and investigation awakened, from which the most happy results may be anticipated.

PREPARATION AND APPLICATION OF MANURES.

The meeting having been called to order, John Sandford, of Marcellus, was called to the chair, and Jas. M. Ellis, of Onondaga, appointed Secretary.

Mr. Brown, Pres't of the Co. Agricultural Society, said: The meeting had been called by him in pursuance of a resolution of the Society, passed at the last annual meeting, and its object was the free and social conference of the farmers of our county upon the leading questions of practical Agriculture. The subject to be discussed at the present meeting was the preparation and application of manures.

Mr. Brown has ascertained by careful observation that he has saved by his attention to the saving and preparation of manures, more than sufficient to pay his town and county taxes. His plan is to stable all his cattle and to litter his barn yard twice a week in winter, with straw, and allow his sheep, and his cattle, when out of the stable, to run over it and tread it in, with the manure they deposite upon it. He sprinkles plaster on his stable floors, and over his yard in sufficient quantities to absorb all the volatile portion of the manure, so that there is no smell arising from it whatever. He cleans his yard in the spring, and places the manure in a heap under his shed, mixing plaster with it plentifully as it is piled; except such a quantity as he may need for his hoed crops, which he prefers to take out fresh and plow it under. Mr. Brown finds that plaster, applied to his manure heap and his stables, have added 50 per cent to the strength and value of his manure. He sows plaster over his barn yard once a week.

Mr. Brown has used salt as a manure with great benefit. He sows it broadcast upon wheat and grass at the rate of 3 to 5 bushels to the acre. On grass he would sow it in the fall—for wheat he would sow it just before the wheat is sown. He found that 3 bushels of salt to the acre on his wheat field, occasioned an increase of 17 bushels of wheat to the acre over that which had no salt. The soil was a strong loam with a stiff subsoil. Mr. B. had not tried salt to kill wire-worms.

Mr. Shepherd thought salt would kill angle-worms.

Mr. Sandford asked Mr. Brown why he preferred fresh manure plowed under for corn and hoed crops.

Mr. Brown said he preferred it in this state because it made the ground warmer and more friable—and was more enduring in its effects.

Mr. Sandford asked if more benefit was not derived from manure used in this way in all cases?

Mr. Brown thought not, because on sowed crops it brought too many weeds, and on sandy soils it leached away.

Mr. Sandford did not believe any soil *leached* in the sense that term is commonly used. Mr. Van Rensselaer of Albany, had proved by careful experiment that such could not be the fact. He had filled a barrel with perfectly clean sand and turned on it water from the farm yard which was saturated with manure, and had found it always came through pure and limpid, and on examination he had never found the least trace of manure lower than one inch and a half below the surface. This proved to his mind that sandy lands did not leach in the sense generally understood, but that the failure of manure on sandy soil is owing to the too rapid evaporation of the more valuable portions of the manure, there being no mineral substances in the sand to fix and retain gases.

Mr. J. B. Burnet was inclined to credit this theory. He thought the fact that all complaints of leaching were so suddenly removed by the application of a light deposit of marl or clay or muck, was corroborative of this theory. An inch or two of marl or clay or muck spread upon the surface of a sandy soil would not prevent filtration certainly. But it removed the complaint of leaching invariably, and rendered manures on such soils effectual and durable. This result must be accounted for by the supposition that marl or clay or muck will fix the volatite portions of the manure, and prevent evaporation.

Mr. Chester Moses would state two facts which he thought conflicted with this theory. 1st. He had always observed that those sandy soils which had a stiff subsoil were more retentive of manures than those with a loose subsoil. 2d. He knows that the wells bordering on the Farmington Canal were filled with the fœtid matter of said canal, notwithstanding there was a wide bank of sand between the canal and the wells.

Mr. Ellis thought the latter fact might be explained by the supposition that the sand had become saturated with the impurities of the water by long continued filtration.

Mr. Curtis Moses thought this a plausible explanation, and it was supported by the fact that the wells were perfectly good for some considerable time after the canal was filled.

Mr. Sandford would remark that whatever objection might be brought to Mr. Van Rensselaer's theory, the experiment he had described was a very simple one, and each person might try it for himself.

Mr. Brown resumed the subject of the preparation of manures, and remarked that he thought all manure should be sprinkled with plaster as soon after its deposition as is convenient. He had a sewer from his sink through his vault, which conveyed the night soil, and suds and dish water, to a reservoir near his barn, which reservoir he kept constantly supplied with plaster. He found the manure thus made very valuable, and would recommend the practice to others.

Mr. Moses and Mr. Sandford had no doubt of the efficacy of plaster in fixing the gasses of manure.

Mr. Sandford had seen large quantities of packing sal carted out of New-York city by the farmers of Long Island and New-Jersey. They consider it a very valuable manure there.

Mr. Ellis believed that the bitterns and ashes from our salt works were valuable manures.

Mr. Brown thought that stiff soils should be plowed in the fall and exposed to the action of frosts. It thus was rendered friable and its particles could be more readily dissolved and taken into the circulation of the plants. Loose soils he thought were injured by fall plowing.

Mr. Ellis would have all lands plowed in the fall, if he could be sure of a covering of snow all winter. He thought plowed land absorbed a great deal of ammonia from snow.

Mr. Brown remarked during the meeting that a friend of his, an excellent farmer, had observed to him that he always derived the greatest benefit from plaster as a manure for wheat, when he sowed it on his summer fallow.

MONTHLY NOTICES.

We are indebted to Capt. Silas Allen, of Shrewsbury, Mass., for some fine specimens of the Baldwin, Seek-no-further, Spice, Sugar Sweeting, Roxbury Russet, and Detroit apples, and we are happy to have an opportunity of speaking of Mr. A.'s well deserved success in fruit-raising His peaches, in particular, have long been celebrated in the Worcester market, and have, we believe, several times taken prizes at the state and county fairs. He has raised during the past season, about one hundred bushels of this fruit, of the very first quality; some of the finest selling at a dollar per dozen; of Quinces he has also raised nearly the same quantity.

Capt. Allen' apple orchard, though not very large, is thrifty and well selected, and the pains he takes in gathering and packing his fruit for market, is worthy the imitation of all fruit-growers. It is, as he says, the cheapest in the long run, for by this means his fruit has acquired a celebrity that ensures a ready sale. His second quality of apples, is equal to most sold as first quality, and his first quality commands a ready sale at the highest price.

The specimens with which we have been favored, are very fine; the Baldwins, in particular, we think the finest of that variety we have ever seen, though in point of flavor the Seek-no-further is inferior to none.

Cortland Academy.—We are gratified to learn that a course of instruction in Agricultural Chemistry and Geology will be given at this institution during the present winter, commencing Dec. 4th, and terminating on the 18th March. It will embrace a general outline of Chemistry and Geology, with their applications to Agriculture, including the nature and analysis of soils, the nature and action of manures, and Vegetable and Animal Physiology, as exhibiting the nourishment and growth of plants and animals. The Principal, Mr. S. B. Woolworth, will devote a large portion of his time to the class, and every effort will be made to elevate agriculture to its true dignity, by presenting the principles and reasons of its processes. We consider this an important experiment in academical instruction, and shall be gratified to learn that its succcss is such as to be followed at many of the other academies of this state.

Agricultural Addresses.—We have received copies of numerous agricultural addresses, and should be glad if we could find room for particular notices and extracts from each. Most of them are valuable productions, well suited to the circumstances under which they were delivered. But we are compelled to pass them for the present with only this general notice—tendering our thanks to the individuals who have been so kind as to forward them.

Wool.—We would call attention to the article of Mr. Pettibone, under the head of "Heavy Fleeces, "in another part of this paper. We received in connexion with the communication, samples of his wool, which we think remarkably good—fine, long, soft, and very free from gum. They show that Mr. P. must have an excellent flock of sheep. Judging from his statement, (for we have no personal knowledge of him or his flock,) we think he has pursued a very judicious course with his flock, and we doubt not his labor and care are well rewarded.

Stoddard's Washington Alpine Strawberry.—Where did our friend Elliott learn that this is "nothing but the common Alpine, save that the soil on which it grew and fruited, was rich and some three feet deep, thus giving the vines every benefit?" We saw it while in full fruit, and can assure Mr. E. that it is no "common" plant, and we know no reason to doubt the statement of Col. Stoddard respecting it. He had a large number of seedlings of various ages, some just coming from the ground, and others in fruit; but nothing to compare with "the Washington."

Cornstalk sugar and Molasses.—We have received from John Beal, of New Harmony, Indiana, samples of corn-stalk sugar and molasses manufactured by him the past season. The sugar is equal in quality to any of that kind we have seen with the exception of a single sample, which we understood to have been made by Mr. Webb, of Delaware. The molasses is clear and thick, but retains a little of the peculiar pungency in taste, which seems to attend more or less, that which is made from Corn-stalks. But we can hardly doubt that improvement will be made in the process of manufacture, by which these articles will be produced of better quality. It should be considered that the business is yet new, and of course partakes of the imperfection attending all untried enterprises. The communication of Mr. Beal having been mislaid until too late for this number, will appear in our next.

American Quarterly Journal of Agriculture and Science.—The fourth number this work, which closes the first year, has been received. From a rather cursory view of its contents, we think it the most interesting number yet issued. Among the original articles we notice one on "The Wheat Fly," (*Cecidomyia,*) by Asa Fitch, M. D. It is accompanied by a well-executed plate, exhibiting several species of the insect in its various stages. We deem this a highly valuable paper, affording a clear and comprehensive history of this diminutive though potent enemy of the wheat-crop throughout a considerable portion of this country. We have not room to particularize, but observe other valuable articles—such as one on manures by Jesse Ryder, and an editorial article on the same subject.

POTATOE ROT.

In this section we have heard but little complaint in reference to the disease or rot in the potatoe, this year, till since the crop was harvested. In some other neighborhoods too, we have heard that heavy losses have been sustained by the potatoes having rotted since they were dug, though while the crop was growing it exhibited generally a healthy appearance. The Boston papers make complaints of potatoes rotting much in the cellars, and within a few days we have heard of many having rotted in this vicinity. Some kinds seems to have suffered more than others—the very excellent kind called *Carters* appear, from statements we have heard, to be more inclined to rot than others. A gentleman in this vicinity who raised this kind quite largely, has lost half his crop since they were put in the cellar. The Shakers, located at Watervliet, also raise the Carters largely. They informed us a few days since that they had lost from $600 to $1000 worth of this kind since they were dug. As to preventives, it is agreed that they should be carefully sorted over, rejecting all that show the least unsoundness, as soon as they are discovered to be rotting. The Shakers inform us that the best remedy which they have discovered, (and they have tried many,) is to *dry them thoroughly* by spreading them exposed to the air. This they say will stop the progress of decay, and it is the only way they know by which it can be stopped.

Musty Oats Poisonous.—Several horses have died at Princeton, N. J., from eating musty oats.

INQUIRIES.

Fowls.—"A Dairyman Farmer," (Trenton, N. Y.) is informed that the *Dorking* is not the largest variety of fowls; they may be considered about third in respect to size. The Java and Malay are larger. The latter are worth $2.50 per pair.

A gentleman at Lexington, Va., proposes several inquiries as follows:

"Which are considered the best breed of cattle, for beef and milk principally?"

The Durham, Hereford, and Devon, each have their advocates. We cannot say which would be best suited to the location of our friend. If his soil is rich and food good and abundant, he would probably succeed well with either the Herefords or Durhams, but if the soil is thin, a smaller animal should be chosen. For milk, the Ayrshires, we are told, have done well in Virginia.

"Which is the best breed of sheep, wool being the primary object, and the farm some distance in the interior.?"

If the flock is to be well tended, carefully sheltered from storms, &c., the very finest wooled Saxons may give satisfactory profits; if they are to take rough fare. and are not to be provided with much shelter, a hardier animal with a heavier and coarser fleece, will be likely to do better. A selection should be made something according to the situation, and care to be bestowed—remembering that the sheep which produce the very finest wool are more delicate in constitution than others, though under favorable circumstances they may be as profitable as any.

"What is the best breed of hogs for the farmer, to make pork to eat, and a little to sell?"

The relative profits of breeds, depend so much on management, that it is almost impossible to give a definite answer to this question. Experience has taught us that those animals which will fatten best and most profitably when kept in pens, and duly provided with food without being obliged to perform any exertion, are not the ones best fitted to "*grub*" for a living. If hogs are destined to range the fields and forests for much the greater portion of their lives, a tendency to muscular fibre, in the breed, rather than a propensity to secrete mere fat, is of paramount importance.

Churning Milk.—"A Subscriber," (Fairhaven, Mass.) Several years ago, while keeping a dairy, we made some trials in churning milk. It was put into a large churn (Galt's,) soon after coming from the cow, and kept in motion till the butter separated. But we do not suppose it to be necessary that it should be churned as soon as milked. While visiting some of the dairies in Orange county, in this state, last season, we noticed the practice of churning the milk was followed, and that the milk in some instances had become *loppered*, or turned to "bonnyclabber." A large barrel churn was used, moved by horse power. We are unable to give the information asked relative to the comparative advantages of this mode of churning, but shall feel obliged if those who can speak from experience will furnish it.

Corn and Cob Meal.—"A Subscriber," (Greenville, S. C.)—We never heard of this kind of meal being "injurious" to cattle or horses, though we have heard one or two instances where it was thought injury had been done to *hogs* by eating meal which had too much cob in it. As to the "cob injuring mill-stones," we know nothing, but presume it is better to grind the article in mills calculated for the purpose. As to the benefit of grinding the cob with the corn, we think it varies with the nature of the corn—being greatest with the hardest and most flinty varieties. From our own experience, we think the advantage of grinding the cob with the light chaffy "gourd-seed" corn of the south would not be very great.

Guinea Corn.—Mr. S. Gilliam, of Oxford, S. C., has sent us a sample of what he says is called "*rice corn.*" The grain is evidently a variety of what is often called Guinea corn, or African Millet. We have seen and sometimes cultivated different kinds of it for the last twenty-five years. It is a very good article to raise for fodder, sown broadcast or in drills, and managed in the same way that our Indian corn is when used for that purpose. Mr. Gilliam states that some which he sowed on the 6th of August last, attained a height of more than five feet by the 29th of Sept., and he thinks would "yield a greater quantity of hay than ever was cut from the same quantity of ground before."

J. G., Gilopolis—We will endeavor to comply with your request.

P. S. S. Carthage, wishes for a plan of a Piggery, for from 30 to 50, or even 100 hogs. He will find some good plans in the 8th vol. of the Cultivator, p. 40 and 109—also vol. 9, p. 96. We shall, however, be glad to receive plans and descriptions of a good piggery from any of our subscribers who have made one to suit themselves.

Woad.—"A Subscriber" wishes to be informed "whether woad can be raised in Connecticut, and whether it is a profitable crop—also whether there is a market for the leaves without going through the process spoken of, in the Cultivator for Sept." If any one has tried it, we should be glad to hear the result.

CONDENSED CORRESPONDENCE.

Beneficial Effects of Ag. Papers.—A correspondent in Otsego county, "Highlander," says:—"Owing chiefly to the circulation of agricultural papers, principally the Cultivator, in this section, within the last 10 years a decided improvement in the following, among many other things, is observable, viz: The operation of plowing is more neatly and thoroughly performed; more attention is paid to the making, preserving, and application of manures, and an increase in the corn crop equal to 20 or 30 per cent."

Cure for the Bite of a Rattlesnake.—"Below I send you," says a letter from Dr. R. North, of Mobile, to the editor of the Cultivator, "a receipe for the cure of a rattlesnake bite, which has been used by a physician of our city, Dr. Woodcock, who has found it nearly always to succeed. I have used it several times in my practice, and it succeeded.

R. Aqua ammonia,
Spts. Turpentine,
Tinct opii, of each, one oz., mixed together.

Take a teaspoonful every hour until sleep comes on. For a child three years old, half a teaspoonful every half hour; and wash the part frequently with the same."

Castor Oil.—Extract of a letter from Mr. Andrew Gray, Parson's Mills, N. C., to the Cultivator:—"I raise the bean, express and clarify in the most simple manner, the pure Castor Oil. My oil is highly approved by all that have used it. Our physicians say that it is far superior to the northern oil, which is highly adulterated." Will Mr. G. please furnish us with the details of the operation. Mr. G. says the wheat in his vicinity was good, oats poor, and corn mostly but one-third of a crop.

"A Dairyman Farmer," of Trenton, N. Y., informs us that in 1842, he obtained 396 bushels of potatoes, ("blue pink-eyes,") from an acre of land.

Salting Pork and Beef.—Mr. R. H. Ostrander, of Glenville, informs us that he has for several years pursued the following method with success:—"In packing down pork I sprinkle in four quarts of rock salt to a barrel, then make a pickle of warm water sufficient to cover all the meat, as strong as can be made with salt, and when cold pour it on; when the pickle becomes much colored with the blood of the meat, draw it off, boil it, take off the scum till it becomes clean, and apply it again; in this way pork will keep sweet throughout the ensuing summer, and will be free of rust.

"In salting beef, take four quarts of rock salt pounded fine; eight ounces of saltpetre, and five pounds of brown sugar; mix them well together, and with these ingredients pack the meat down very closely, so as that they will of themselves cover the whole with brine. The next spring draw off the brine, clarify it as before mentioned. adding a little salt to it, and apply it again, and the beef will keep very sweet and fine tasted during the whole summer following."

Mr. J. R. Fuller of Kent, Ct., says—"In looking over the Oct. number of the Cultivator, I saw some remarks on the subject of preserving Pork, with a request that if any one had practiced the same method, to inform you of the result. I have for more than twenty years, with very few exceptions, cut and packed my pork and hams the evening after butchering, and always pour on the brine boiling hot, the same evening or the next morning. The barrel should be left open until the brine gets cold. I have never known any one that has tried that method that was not satisfied with the result. I can therefore, with the fullest confidence, recommend that method."

FOREIGN.

By the Britannia, arrived at Boston on the 20th ult., we have received English papers to the 4th Nov. The nature of the intelligence brought is important in relation to the prices of American produce. It is now well ascertained that the deficiency in the supply of bread-stuffs throughout England, Scotland and Ireland, as well as over a considerable portion of Northern Europe, is truly alarming. Many of the continental ports have already been opened duty free, and the popular cry is loud for Great Britain to place her ports in the same situation—an event which seems to be expected with considerable confidence. The rise in the value of wheat in the English markets has been equal to 20 shillings per quarter (8 bus.) within the last two months, and the Mark-Lane Express states that it may be regarded as "pretty certain that quotations will be higher in December and January than at present." In relation to the disease of the potato crop, it is said "accounts are more and more serious." Complaints of heavy losses by rot are received from Scotland, and in Ireland it is said a third of the crop has been destroyed. The government has sent two agents, Professors Lindley and Henslow, to Ireland, to investigate the nature of this alarming malady. That more or less suffering must be experienced by the poor population of Ireland and some other districts, is scarcely doubted; to what extent the government will be disposed to aid them, is not yet known. In addition to the free admission of foreign corn, which all seem to look for, it is stated that O'Connell, who is regarded as the organ of the Irish people, demands in their behalf a grant of money to the extent of a million and a half of pounds, to be expended in the purchase of food. He also asks for the prohibition of corn and provisions leaving the island, and for the prevention of distilleries consuming grain.

The effect of this intelligence has been to cause a still farther advance in the prices of our bread-stuffs and provisions. Flour went up at once to seven dollars per bbl., which it seems likely will be for the present sustained, as the supply for the British markets is looked for chiefly from the United States and Canada.

American wheat, in England, was quoted at 8s. 6d. and 9s. sterling for 70 pounds. American flour, in bond, was quoted at 31s. and 32s. sterling, per bbl. Beef, mess, per bbl, of 200 lbs., 34s. to 46s. Pork, prime mess, per bbl. of 200 lbs., 55s. to 60s. Cheese, prime quality, duty paid, 52s. to 60s.—ordinary 46s. to 50s. American wool in London, 1s. 3d. to 1s. 8¼d. per lb.

American Guano.—We find in the Mark Lane Express, a communication from Mr. Henry Colman, giving an account of the discovery of a large amount of guano on an island in the Gulf of St. Lawrence. The information was communicated to Mr. Colman by a gentleman from New-York, of the highest respectability. The discovery of the guano was made by a young man last season, and a small cargo of it was taken to New-York. A quantity of it was purchased by a gentleman who tried it side by side with the Peruvian and Ichaboe guano, and the results were decidedly in favor of that from the Gulf of St. Lawrence.

The Potato Disease.—The Hague, Oct. 15.—We have accounts from Copenhagen of the 3d of this month, which state that the disease in the potatoes is spreading more and more in Denmark, as in Funen, Lolland, Falster, and likewise Sealand, especially in Amak, near Copenhagen. It has likewise appeared in the Durhie. It is stated that the disease is beginning to show itself in Sweden, and as the crops, particularly of the latter kinds, are more backward than in the Netherlands, it is feared that the disease may spread wider. It will, therefore, be advisable to take measures in the discharging of cargoes from that country, to ascertain the quality of the potatoes.

GRAIN CROPS OF EUROPE.

In one of our English exchanges, we find the following extracts from the *Gazette d' Augsburg*, on the crops of 1845 in Europe. We do not know what may have been the writer's opportunities for obtaining the information, but if it can be relied on, the article is very valuable:

According to the custom we have adopted, we shall divide our account of the results of the last crop into two parts—one referring to the east, and the other to the west of Europe. For several years past the east threatened us with sterility; it first of all began in Russia, spread over Poland and Prussia, and appeared even this year likely to diffuse itself in the east of Germany. Experience has generally proved that in the boreal latitude the rainy years are more sterile than the dry ones. This fact has again been confirmed during the last years. It was humidity that diminished the crops a few years ago in Russia, and which produced the like effect in Poland, Galicia, and Upper Silesia in the course of last year. In Germany the humidity has not produced any unfavorable consequences, but in certain countries; there are others, on the contrary, which have suffered from want of rain. The results of the crops are, in the mean time, far from being satisfactory, and, from the calculations which have been made, will not suffice the public consumption.

It is far from our intention to represent the situation of things in more dreary colors than belongs to it; but we do not wish, and we ought not, to exaggerate the advantages of it, desirous as we are of attaining our present object, which is to furnish an exact appreciation of actual circumstances. We shall separately name the different countries, and indicate the supplies they stand in need or can dispose of.

Russia will have sufficient corn for the whole empire, without purchasing any foreign corn. Its Governments are in a position to assist mutually each other, but it is very doubtful whether they can send much corn abroad.

The crops of Poland are not sufficient for its general consumption; and, unless it has been previously supplied will suffer from a scarcity, or be obliged to receive corn from abroad. But whom can one have recourse to when one's neighbors have only had themselves but middling crops, and have not wherewith to supply the deficiency? Money also is scarce in Poland, and important sums cannot be sent abroad to purchase corn.

The kingdom of Prussia has greatly suffered last year and this from inundations, which have ravaged precisely its most fertile countries; and want, which is generally felt there, is on the point of transforming itself into actual famine.

The news from Pomerania agrees in stating that the results of the last crops are very mediocre.

In the Grand Duchy of Posen only a middling crop has been obtained, and anterior provisions can alone prevent a scarcity. The author does not remember having heard such numerous and general complaints, unless it be in the years 1804 and 1817. God grant that the unfortunate events of that epoch be not again reproduced! There are in this province whole countries where the usual corn sellers will be obliged themselves to make purchases the next spring. The situation of Galicia is still worse. The price of rye rose 60 per cent. immediately after the crops: it is still on the rise.

In Hungary, which is usually so productive, the Government has been obliged to lay in large stores of corn to prevent a famine. The hope entertained of having good crops has been still more cruelly disappointed than in Silesia.

In Austria, Moravia, and Bohemia, the results of this year's crop are below those of the averake ones, and must scarcely suffice for the general consumption.

If we consider the west of Germany, we find first of all, that the crops in Saxony have not precisely failed, although they are very far from being abundant. The same may be said of the provinces of Brandenburg, and of Madgbeurg.

Bavaria, like other countries, has suffered greatly this year from hail-storms and water-spouts; the results of the crops have in consequence been diminished, as likewise by the state of the atmosphere, which has shown itself but little favorable to the cultivation of corn.

Wurtemburg, the country of Baden, Westphalia, and the Rhenish provinces, have been better treated; but the disease which has ravaged the patato crop will be severely felt. Nevertheless, the potato crop has been generally good throughout Western Germany; it will supply many deficiencies in the crops of other places, although they are not so much grown as in other parts of Germany.

Belgium and Holland have had but bad crops; and the news from France sufficiently proves that this year has not been a productive one.

Spain occupies but an inferior rank among corn-growing countries; still reports from this country do not mention that the crops have been deficient.

England, where the states of the European continent generally find a market for their surplus corn, appears to-day to be reassured on the wants of its internal consumption, or at least the alarming news which arrived from that country has been succeeded by much more favorable intelligence. Those who count upon corn supplies from the Baltic and provinces of the North Sea will be greatly deceived; the prices of these productions will first of all be very high, and in the second place, the quantities that can be supplied very small. A great quantity of whent has this year been struck by blight; and this disease, which has spread throughout Germany, Poland, and Hungary, has deteriorated the quality of the corn as well as diminished the quantity. Further, it cannot now be accurately known whether at a later period England will not be reduced to supply itself from abroad, for it is well known that it is only in case of an abundant crop that enough corn can be grown for the country. In the contrary case, she will look to supplies from America, or from the countries bordering on the Black Sea.

In Scandinavia, that is to say Denmark, Norway, and Sweden, the crops have not been satisfactory. In a few words, then, it may be said that for many years past there has not been so unfavorable a year as the present one; and if it be added that last year only furnished but indifferent crops in comparison with the preceding ones, this circumstance ought to give rise to measures being taken to prevent the danger which threatens us."

Potatoes in Maine.—In 1844, the potatato crop in Maine, was 12,304,000, bushels only second to that of New-York, which was 17,703,000 bushels. New-York raised six bushels, and Maine twenty-four bushels, to every person in these respective states. From last year's crop, it is estimated that the loss by rot this year in Maine, cannot be less than $1,230,000 dollars, or more than two dollars to every person in the state.

Warts on a Cow's Udder.—Muriate of Ammonia (sal ammoniac,) 2 drachms, powdered savin 1 ounce, lard 1½ ounces,—rubbed well together, and applied daily to the warts, is said to have been an efficient remedy. If the cow is not in milk, and the warts are large, they may be removed by operation, either with the knife or cautery.

Profits of Fruit.—The Bost. Cultivator says, that one of the largest and most flourishing peach orchards in New-Jersey, a few years ago, every tree of which was in good condition, yielded fruit in one year which sold for sixteen thousand dollars. The number of trees or extent of ground occupied, are not stated.

GARDENER WANTED.

A YOUNG MAN of good character, who understands his business thoroughly, may hear of a pleasant and permanent situation, on application to the Editor of the Cultivator. Oct. 15—1t*

PRICES OF AGRICULTURAL PRODUCTS.

New-York, November 21, 1845.

COTTON—New Orleans per lb. 6¾a9¼ cents—Upland 6a8 cents. Market dull.

BUTTER.—Western, 15a17—Goshen, 18a20.

CHEESE—7½a8½ cts. per lb.—in demand.

FLOUR—Since the arrival of the Steamer of the 20th, flour has advanced to $6.87a$7.

GRAIN—Wheat per bushel $1.30a$1.36, for Genesee—Corn, Northern and New Jersey, white and yellow, 79a80 cts.

HEMP—Dew rotted, American, per ton, $95—Manilla $155—Russian, cleaned, $180a$185.

HOPS—Best sort Eastern and Western 30a35 cts. per lb.—sales moderate.

HAMS—Pickled, 9½a10 per lb.—city smoked 9½a11 cts.—green hams 8 cts.

BEEF—$7.75a$8 per bbl.

LARD—8a8½ per lb.

PORK—Ohio mess $14a$14.12½ per bbl.—Dutchess county, new, $14.37½a$14.50.

TOBACCO—Kentucky, per lb. 3 to 7 cents—Connecticut seed leaf, for export, first received, 10½a12 cts.

WOOL—(Boston prices.) Nov. 21:

Prime or Saxony fleeces, washed per lb..........	40a45	cts.
American full blood fleeces,....................	37a40	"
" three-fourths blood fleeces,........	34a35	"
" half blood do	32a33	"
" one-fourth blood and common,....	29a31	"

ALBANY, Nov. 22.—At the opening of the market, Flour, including Western as well as Genesee, sold at $6¾a⅞; towards noon the prices stiffened, and the market closed firm at $7. Wheat was sold at 144a145c. The only sale of Barley is a load two-rowed at about 62½c. Rye, by canal, 61½c., in the street, 79c. Oats 46a48.

NEW-YORK, Nov. 22.—Cotton, sales of 200 bales at full ⅛c decline. Flour opened at $7·25, at which several sales were made; afterwards 4000 bbls. in store, deliverable in 30 days, at $7.12½; other lots at $7.06; closing at $7, sellers but no buyers; Southern $6 75a7, sales.

3000 bu. Southern wheat at 148c.; 6000 bu. rye at 85c.; 2000 at 88c.; corn 85., buyers; oats 52c; barley 65a67c.; 1500 bags black eyed peas yesterday at 175c. bag.

Cloverseed 10½c., buyers of prime. Beef and pork are both rather heavy. Ohio new lard sold in bbls at 8¾.

VALUABLE WORKS, BY A. J. DOWNING, Esq.

1. *The Fruits and Fruit Trees of America*, or the Culture, Propagation and Management, in the Garden and Orchard, of Fruit Trees generally; with descriptions of all the finest varieties of Fruit cultivated in this country. 1 thick vol. 12 mo. Fifth edition, with many engravings.—$1·50. Or a superior edition, in large 8 vo., to match the author's other works. $2.50.

"At length we have the gratification of announcing this long expected work, and from a perusal of it, we can say, that nothing compared with it on the subject of Pomology has yet been published in the United States. This work will unquestionably now become the standard pomological work of this country; for the great care bestowed on the different kinds, arranging and connecting numberless synonyms, and giving accurate outlines and descriptions, will make it a safe guide."—*American Agriculturist.*

2. *A Treatise on Landscape Gardening*; adapted to North America, with a view to the improvement of Country Residences. Comprising historical notices, and general principles of the art; directions for laying out grounds, and arranging plantations; description and cultivation of hardy trees; decorative accompaniments to the house and grounds; formation of pieces of artificial water, flower-gardens, etc.; with remarks on Rural Architecture. New edition, with large additions and improvements, and many new and beautiful illustrations. 1 large vol. 8 vo. $3.50.

This volume, the first American Treatise on this subject, will at once take the rank of THE standard work."—*Silliman's Journal.*

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3. *Designs for Cottage Residences*, adapted to North America, including Elevations and Plans of the Buildings, and Designs for Laying out Grounds. By A. J. Downing, Esq. 1 vol. 8 vo., with very neat illustrations. Second edition, revised. $2.00.

A second edition of "Cottage Residences" is just published as Part 1; and it is announced by the author that Part II., which is in preparation, will contain hints and designs for the *interiors* and furniture of cottages, as well as additional designs for farm buildings.

4. *Gardening for Ladies;* and Companion to the Flower-Garden. Being an alphabetical arrangement of all the ornamental plants usually grown in Gardens and shrubberies; with full directions for their culture. By Mrs. Loudon. First American, from the second London edition. Revised and edited by A. J. Downing, Esq. 1 thick vol. 12 mo., with engravings representing the processes of grafting, budding, layering, &c, &c. $1.25

"This is a full and complete manual of instruction upon the subject of which it treats. Being intended for those who have little or no previous knowledge of gardening, it presents, in a very precise and detailed manner, all that is necessary to be known upon it, and cannot fail to awaken a more general taste for these healthful and pleasant pursuits among the ladies of our country"—*N. Y. Tribune*

Published and for sale by WILEY & PUTNAM,
Nov. 1—3t. 161 Broadway, N. Y.

CO[illegible] THIS NUMBER.

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☞ **ADVERTISEMENTS** inserted in the Cultivator, at $1,00 per 100 words for each insertion.

THE CULTIVATOR FOR 1846.

THE new volume of "The Cultivator," for 1846, commences on the first of January, and the Nos. will be promptly issued on the first of each month as heretofore. In the importance, extent and variety of its contents—in the number of its contributors—in the beauty and variety of its illustrations, as well as in the extent of its circulation, this paper is without a rival in the agricultural press, at home or abroad.

Terms—Single copies, $1.00 a year—Seven copies for $5.00—Fifteen copies for $10. Any person disposed to aid in promoting the circulation of "The Cultivator," will receive sample numbers and prospectuses, on application, post paid. Address LUTHER TUCKER, Editor Cultivator, Albany, N. Y.

☞ Editors with whom we exchange, will confer a favor by publishing the above.

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MAY be had at the Albany Agricultural Warehouse, 23 Dean-street. This is a very superior mill. For description and cut see Cultivator for 1845, page 276

Dec. 2. E. COMSTOCK & CO.

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